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Measuring the Performance of Livability Programs, MTI Report 12-06

Peter J. Haas

San Jose State University, peter.haas@gmail.com

Lisa Fabish

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Measuring the Performance of Livability Programs



MTI Report 12-06



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REPORT 12-06

MEASURING THE PERFORMANCE OF LIVABILITY PROGRAMS

Peter J. Haas, Ph.D.
Lisa Fabish

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To order this publication, please contact:

Mineta Transportation Institute
College of Business
San José State University
San José, CA 95192-0219

Tel: (408) 924-7560
Fax: (408) 924-7565
Email: mineta-institute@sjsu.edu
transweb.sjsu.edu

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EXECUTIVE SUMMARY

Livability programs are an inherently broad set of approaches intended to create communities with coordinated transportation, housing and commercial investments, with specific goals and objectives subject to local priorities and conditions. The great variety of such efforts calls to question whether and how such programs can measure their success. This research project analyzes five regional level “livability” programs to answer the following question: How should agencies measure the performance of livability programs? Within that broader question, two subsidiary questions are explored: 1) What can, and should, new livability programs learn from existing livability programs’ approaches to performance measurement? 2) To what degree are the performance measurement approaches of existing livability programs aligned to the objectives of the programs, their stakeholders, and to recommendations for good performance measurement?

A review of literature on livability programs and performance measurement techniques provided the basis to develop a framework to analyze the research questions. First, we developed a synthesized set of criteria for good performance measurement: customer focus; alignment to strategy, goals, and objectives; clarity; measurability (efficiently and accurately); balance; decision-orientation; and the ability to address key stakeholder perspectives. Next, to provide more clarity to the criterion “customer focus,” we developed a synthesized set of customer criteria for livable communities, including factors addressing economics, location, amenities, housing types, and safety.

The current performance measurement programs of five relatively mature livability programs were analyzed based on the criteria for good performance measurement. In addition to providing a detailed analysis of each program, common themes and lessons learned were drawn from across the programs. The goal was not to critique the programs, but rather to provide insight into good and potentially effective program practices and potential pitfalls that other programs might learn from.

The analysis revealed that programs commonly measure sources and uses of funds, volume of development activity, changes in land value, and jobs created. While some programs characterize the development activity based on livability criteria (e.g., percent affordable) most programs do not capture all of their customers’ livability goals in their development activity statistics. Beyond these commonalities, factors reported across programs are very diverse.

Four specific measurement types were called out by interviewees as particularly useful in supporting program decisions: delivery of project commitments (get what we funded?); the percentage of the region’s development that occurs in targeted development areas (are we developing where we want to develop?); leveraged funding (did we close the development financing gap?); and transportation access factors such as induced ridership, cost per induced rider, and bicycle and pedestrian access (did we achieve a transportation land-use link?).

Considerations for applying performance measurement to livability programs gleaned from the analysis are: 1) the structure of an agency does not dictate the focus of its

measurement; 2) measuring the nature, not just the volume, of development is critical to understanding the impact of the program; 3) meaningful measurement of livability need not be costly; 4) a focus on decisions pays off; 5) reporting on both affordability and land value appreciation goals prevents measurement imbalance from leading to program imbalance; 6) performance reporting should be tailored to the many audiences of livability programs; and 7) agencies must balance measurement of quantifiable factors with subjective factors such as “quality of life.”

There is no one-size-fits-all approach to measuring livability – by its nature it is a locally defined issue with a wide range of stakeholders. The hope is that this research will help new livability programs learn from others when developing measurement strategies.

I. INTRODUCTION

Programs to support the creation of “livable communities” are on the rise among transportation agencies and their partners at all levels of government. The Livable and Sustainable Communities initiative is currently one of the top three initiatives of the U.S. Federal Transit Administration (FTA).¹ This FTA effort is part of the overall U.S. Department of Transportation’s (USDOT) Livable Communities initiative and includes active engagement with the Interagency Partnership for Sustainable Communities – a joint project between the DOT, the U.S. Department of Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA).² At the regional level, the San Francisco Bay Area’s Metropolitan Transportation Commission’s Transportation for Livable Communities program has been in place since 1998. The Atlanta Regional Commission (ARC), Portland Oregon Metro Area (Metro), The Metropolitan Council (in Minneapolis-St. Paul, Minnesota), and the North Central Texas Council of Governments (NCTCOG) also have well-established livability programs at the regional level. These metropolitan planning organizations (MPOs) and councils of governments (COGs) often collaborate in their pursuit of livability with redevelopment agencies, other state and local agencies focusing on housing, not-for-profit community development corporations, and for-profit developers.³ In general, livability programs focus on supporting the creation or preservation of communities with some subset of the following characteristics, along with other agency-specific criteria: dense; mixed-use; strong public transit, bicycle, and pedestrian access; mixed-income and/or affordable; location efficient; environmentally sustainable; and a working definition of “quality of life” or “sense of place.”⁴

The wide range of organizations involved in livability initiatives, and the academics studying the topic, generally agree on the opportunities and problems they seek to address. Specifically, there appears to be general agreement that the demand for housing in “livable” communities will increase significantly over the next twenty to thirty years and that a handful of barriers, such as lack of necessary capital, zoning issues, lack of joint planning between transportation and land-use agencies, and limited undeveloped land in suitable corridors, prevent the developer community from investing to capture that demand. However, despite this general agreement, the organizations seeking to address those barriers have a very diverse range of initiatives with a diverse set of stated objectives, strategies, and metrics.

The first step in achieving livability – or any other goal – is to clearly define it. Well-developed metrics define what it would mean to succeed and help put programs on the path to success. In fact, Reconnecting America’s recent white paper, *Realizing the Potential for Sustainable and Equitable TOD: Recommendations to the Interagency Partnership on Sustainable Communities*, recommends that the partnership prioritize the development of “livability indicators” – metrics that can be used by the partnership and by agencies at all levels of government to guide and evaluate programs and prioritize funding.⁵

The purpose of this project is to contribute an initial step toward that objective by analyzing existing metrics for livability programs and providing recommendations for future applications of those metrics for government agencies seeking to support livability.

This report focuses on a subset of livability programs: those that are led by MPOs or other regional agencies within which an MPO resides. In many cases, a COG is both the land-use planning agency and the MPO for the region. While many livability programs are led by agencies at other levels of government and by agencies with non-transportation focuses, such as environmental agencies, selecting this subset enables a more focused research project that can provide more detailed and targeted recommendations to the community. However, as is discussed at length below, livability is a multi-faceted goal. A multi-stakeholder perspective was retained throughout the research, meaning that no single set of priorities was held to be necessarily the most valid.

II. METHODOLOGY

The data analysis focused on five livability programs: Atlanta Regional Council's (ARC) Livable Communities Initiative (LCI), the Metropolitan Transportation Commission's (MTC) Transportation for Livable Communities Program (TLC) (in the San Francisco Bay Area), Portland Metro's Transit Oriented Development and Centers Program (TOD/Centers Program) (in the Portland, Oregon, metropolitan area), the North Central Texas Council of Governments' (NCTCOG) Sustainable Development Initiative (SDI), and the Metropolitan Council's Livable Communities Act Grant Program (LCA) (in the Minneapolis-St. Paul metropolitan area). All of these agencies are regional agencies. Most have both a metropolitan planning organization (MPO) role and a broader council of governments (COG) role. The exception is MTC, which is the only MPO for the region and collaborates with the COG and local jurisdictions on land-use issues. These programs were selected to provide a diverse range of examples in terms of location in the country, program strategies, and city densities. All five programs were identified in the literature review as mature programs that can serve as examples of current practices in livability.

The data analysis consisted of two parts: analysis of program documentation and interviews with program leadership. Livability program documentation provided the data required to document existing metrics and to analyze fulfillment of criteria for good performance metrics synthesized from the literature review. Program documentation reviewed included program websites, fact sheets, calls for projects, performance reports, and program evaluation documents. A complete list of program documentation consulted is provided in the bibliography.

Data collection was completed based on a data template designed to capture information about the programs in a consistent manner. The full data tables are provided in the appendix. The analysis compared the metrics used by each program to criteria established based on the literature review.

To test the initial findings developed from the program documentation analysis and to provide a richer understanding of the applicability and value of key metrics, interviews were completed with leaders from each of the programs analyzed. Interview questions were formulated from the initial findings.

The interview responses provided deeper insight into the initial findings of the program documentation analysis and supported the development of recommendations based on agencies' experiences. The intent was not to critique individual programs, but rather to identify trends and lessons that can be applied broadly. As such, the recommendations are not absolute, as the metrics that work for one program may not work for others. Rather, the recommendations focus on issues for programs to consider when choosing metrics.

III. LITERATURE REVIEW

PERSPECTIVES ON LIVABILITY

Perspectives on what constitutes a “livability program” vary based on the agencies involved. Additionally, while most livability initiatives to date have focused on urban and suburban areas, the Federal Department of Transportation (FDT) and its federal partners seek to address livability for all of the United States, including rural areas that may define livability very differently from their urban and suburban peers.⁶ For example, while accessibility to jobs and other destinations may be a priority, accomplishing this aim through higher density development may not be the focus in a rural community.

The Interagency Partnership for Sustainable Communities (IPSC) – a joint project among the U.S. Department of Transportation (USDOT), the U.S. Department of Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA) – developed a list of six livability principles which intend to address the goals of all three agencies while being applicable to urban, suburban, and rural communities. The principles are defined as:⁷

Interagency Partnership for Sustainable Communities Livability Principles

1. Provide more transportation choices. Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.
2. Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.
3. Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.
4. Support existing communities. Target federal funding toward existing communities – through such strategies as transit-oriented, mixed-use development and land recycling – to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.
5. Coordinate policies and leverage investment. Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
6. Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods – rural, urban or suburban.

Senator Christopher Dodd introduced the Livable Communities Act of 2009 (S. 1619, 2009) to formally establish the HUD Office of Sustainable Housing and Communities and the Interagency Council on Sustainable Communities. This legislation defines livability as follows:⁸

The term ‘livable community’ means a metropolitan, urban, suburban, rural, or neighborhood community that—

- (A) provides safe and reliable transportation choices;
- (B) provides affordable, energy-efficient, and location-efficient housing choices for people of all ages, incomes, races, and ethnicities;
- (C) supports, revitalizes, and encourages the growth of existing communities and maximizes the cost effectiveness of existing infrastructure;
- (D) promotes economic development and economic competitiveness;
- (E) preserves the environment and natural resources;
- (F) protects agricultural land, rural land, and green spaces; and
- (G) supports public health and improves the quality of life for residents of and workers in the community.

However, while the IPSC and similar partnerships at the state, regional, or local levels may state a set of common goals, the goals are often pursued through specific activities of the member agencies and organizations. These organizations – government agencies at different levels and with different missions, non-profit partners, and developers – all have different perspectives and priorities when formulating programs to pursue livability.

Livability reflects the whole picture of a community – including transportation, housing, businesses, recreation facilities, other infrastructure, and even the quality of the air. However, there is no single agency with jurisdiction over all of these elements and many are delivered by the private sector or non-profit organizations. In the end, livability is not about the government agencies themselves. Rather, it is about people: creating a place that people find to be a good place to live. Therefore, in order to pursue and achieve livability, a wide range of actors with a wide range of perspectives must be involved. These stakeholders include transportation, housing, development, and environmental agencies at the federal, state, regional, and local levels, as well as customers and developers. Each organization brings its own history, objectives, jurisdiction and regulatory authorities, toolsets, and biases to the process. While this provides a rich diversity of views and strategies, it can also lead to confusion or conflicting objectives.

Transportation agencies tend to focus on mobility, accessibility, multi-modal options, and reduction of negative externalities of transportation (such as emissions) as their contribution to livability. For example, the USDOT’s livability program aims to “enhance the economic

and social well-being of all Americans by creating and maintaining a safe, reliable, integrated and accessible transportation network that enhances choices for transportation users, provides easy access to employment opportunities and other destinations, and promotes positive effects on the surrounding community.”⁹ Strategies such as transit-oriented development (TOD), context sensitive solutions, and bicycle/pedestrian access are key tools in a transportation agency’s livability toolbox and already incorporate an integrated transportation land-use perspective. Coordination with development agencies and local cities and towns is critical to integrating land-use and transportation planning. Equity is certainly an objective, but affordability is not the primary lens.

Development and housing agencies, on the other hand, define livability primarily through the lens of affordability and the proximity of affordable housing to jobs. For example, HUD’s mission is focused on community development and increasing access to affordable housing. The primary strategies applied by housing and development-oriented agencies are funding and tax incentive programs that support affordable housing and job creation.¹⁰ However, as HUD Secretary Donovan stated in a congressional testimony in 2009, its mission “cannot be achieved in a vacuum.”¹¹

Transportation has become a significant portion of household expenditures, and the connection between transportation choices and housing choices must be addressed to achieve HUD’s mission. On average, families spend 19% of their household budget on transportation, but households with good access to transit spend only 9%. For very low-income families, transportation can represent up to 55% of the family’s budget.¹² For HUD, increasing transit ridership is not a primary focus. Rather, increased transit access may be one way to help reduce the combined cost of housing and transportation and to help improve access to jobs.

Environmental agencies look at livability from the perspective of quality and safety of the natural environment. They find common ground with transportation agencies to the extent that transportation agencies seek to reduce emissions or traffic congestion. They find common ground with development and housing agencies on issues of environmental equity. However, if adding a new road improves mobility or access to jobs better than adding new transit lines, environmental agencies may find themselves at odds with their partners in defining livability. Just as TOD is a tool for transportation agencies to address the transportation-land-use connection, “smart growth” has been EPA’s focus for addressing the intersection of development and environmental concerns.¹³

Livability is much more than the sum of its parts. A harmonized perspective can aid in achieving any of the participating agencies’ individual goals. Programs that address only one aspect of livability can result in conflicting incentives, communities that only achieve one aspect of livability, or can lack focus on areas that do not fall under any agency’s jurisdiction, such as quality of life. For example, improvements in a transit station area can increase the value of land, resulting in displacement of low-income residents from the station area.¹⁴ What might be considered a livability success by some agencies might be considered a failure from a development or housing agency’s perspective. Another example is the Low Income Housing Tax Credit (LIHTC), a HUD program that provides incentives for development in Qualifying Census Tracts (QCTs) and Difficult to Develop

Areas (DDAs).¹⁵ While this program may be effective in stimulating development in these areas, it is less effective in reducing the combined housing and transportation costs, as many station areas are not in these zones. For this reason, many states allocate a portion of their LIHTC programs specifically to developments that meet criteria for proximity to transit lines.¹⁶ In developing case studies on opportunities for housing near transit, the Center for Transit-Oriented Development (CTOD) found that “Most existing affordable housing policies identified ... do not include special consideration or criteria for transit proximity,” and “Most TOD efforts do not include an affordability component.”¹⁷

EFFECTIVE PERFORMANCE METRICS IN CUSTOMER-FACING GOVERNMENT PROGRAMS

What Makes a Good Performance Measure?

Given this complex environment, selecting appropriate performance measures can be a challenge. This section of the report discusses what makes a good performance measure. The following section explores the literature on specific measures for agencies and programs related to livability.

Before discussing what to measure, we must first understand why we are measuring performance. At the federal level, agencies are required by the Government Performance and Results Act of 1993 (GPRA) to establish measures that evaluate agency and program performance in achieving established strategic goals. Similar requirements for performance measurement and reporting are in place for programs at other levels of government, either through state legislation or requirements placed on federal funding.

The most straightforward reason to measure performance is that agencies tend to focus on the things that they measure. When tied to incentives for agencies or individuals, financial or otherwise, performance measures serve to focus efforts on the most important objectives.

Performance measures also support decision making at multiple levels. Program or agency measures provide feedback to senior management on the overall direction of the program or agency in support of decisions about strategic direction and resource allocation. Such measures can also be used for external reporting, to secure funding, or to gain stakeholder support. At the operational level, performance measures can help managers and staff to refine tactics and processes and improve results or efficiency.

Much has been written on what makes a good performance measure, both for public and private sector organizations. In 1997, the National Performance Review – established in 1993 by President Clinton and Vice President Gore – published a study on “Best Practices in Performance Management” that synthesized relevant literature and the results of extensive interviews of organizations considered to be leading practitioners of performance measurement in both the public and private sectors.¹⁸ This report outlined common uses of performance information, a number of considerations for what makes a good performance measure, and best practices in structuring and implementing the measurement program.

The authors note that performance measures can be used for a wide variety of purposes, including decisions on resource allocation, identification of gaps in the achievement or definition of goals, focusing efforts to improve processes, and the evaluation of the performances of individual employees and managers.

The authors apply a variation of a commonly used framework that breaks down performance measures into four primary types: outcomes (end results, in relation to program purpose), quality of outputs (how well goods or services are delivered, and how satisfied customers are with them), efficiency of operations (conversion of resources to outputs), and effectiveness of operations (specific contribution of the operations to the outputs and program objectives).

In this context, outcomes, and to some degree outputs, are most useful in supporting decisions on resource allocation and goals. On the other hand, measures of outputs, efficiency, and effectiveness are most useful in focusing efforts to improve processes. For the evaluation of staff performance, measures must be directly tied to an individual's contribution so that the appropriate type of measure will correspond to the individual's role. For example, a senior executive may be held accountable for outcomes, but an operations manager may be more appropriately measured based on outputs such as customer satisfaction with service levels or efficiency.

The authors provide the following summary of what makes a good measure: "[The measure] is accepted by and meaningful to the customer; tells how well goals and objectives are being met; is simple, understandable, logical and repeatable; shows a trend; is unambiguously defined; allows for economical data collection; is timely; and is sensitive."¹⁹

The authors also summarize what makes a good measurement system: "[The system] comprises a balanced set of a limited vital few measures; produces timely and useful reports at a reasonable cost; displays and makes readily available information that is shared, understood, and used by an organization; and supports the organization's values and the relationships the organization has with customers, suppliers, and stakeholders."²⁰ In the context of a multi-stakeholder environment, the authors note that study participants indicated that aligning metrics to strategy made it easier to align the contributions of multiple stakeholders.

Literature on performance evaluation written specifically for transportation agencies supports many of the conclusions of the National Performance review and provides additional perspectives. A 2003 Transit Cooperative Research Program (TCRP) report provides a synthesis of good practice in performance measurements (TCRP 88).²¹ It addresses four primary points of view for transit performance measures: customer (existing and potential), community (including mobility, financial, and pollution reduction impacts), agency (focusing on efficiency and effectiveness), and driver/vehicle (focusing on traditional measures used by traffic engineers). Nakanshi and List provide a set of characteristics of effective measurement systems used in the report.²² Most of these characteristics relate to the structure and implementation of the entire measurement program, although several also relate specifically to selected measures. The characteristics are as follows (direct quote):²³

- Stakeholder acceptance of the performance system
- Linkage to goals
- Clarity of performance reports to the intended audience
- Reliability and credibility of the underlying data
- Variety of measures, reflecting a broad range of issues and trended over time
- Number of measures, balancing variety with usability (not overwhelming the audience)
- Level of detail, balancing sufficient detail for decision making with simplicity
- Flexibility, allowing change as goals change, but retaining links to historical measures
- Realism of goals and targets

Like the National Performance Review, the authors of TCRP 88 emphasized the importance of a customer focus.²⁴ Many public sector managers believe that the private sector “has it easy” when it comes to performance measurement, because everything can be measured through financial measures, such as revenue and profit, whereas the public sector must focus on objectives that are more difficult to measure. TCRP 88 found that, in fact, while both public transit agencies and private companies measure revenue-based objectives, private sector companies are more likely than government agencies to measure the “soft” issues of customer satisfaction and loyalty. On the other hand, the report also found that transit agencies are more focused on concrete operating measures such as boardings per mile. Private companies have determined that customer satisfaction is fundamental to their strategic goals, as it can drive revenue, and have found ways to measure this “softer” factor. The authors posited that most public transit agencies do not take this end-goal orientation to performance measurement due to the cost of measuring customer satisfaction.²⁵

Gary VanLandingham echoes similar themes to the National Performance Review and TCRP reports. He states that performance measures are intended to “let us know: how well we are doing, if we are meeting our goals, if our customers are satisfied, [and] if and where improvements are necessary.”²⁶

He goes on to state that performance measures are intended to support “intelligent decisions about what we do,” and should be expressed in a way that best supports the decisions. VanLandingham’s list of criteria for a good performance measure is similar to those discussed above: “Reflects the customer’s needs as well as the organization’s, provides an agreed upon basis for decision making, is easily understandable, is easily measurable, is broadly applicable, is easily interpretable.”²⁷

VanLandingham also applies the “output” v. “outcome” distinction and notes that while internal measures can focus on output, external performance measures intended for reporting to the customer and other stakeholders must focus on outcomes, since stakeholders seek to understand what resources put into the process delivered in the end.²⁸

Measuring outcomes and outputs does not always provide the kind of insight that leaders require to make strategic and operational decisions. Measuring outcomes or outputs can describe what happened, but often cannot tell you why. Many programs have “diffuse, long term goals that defy ready measurement.”²⁹ Livability programs, as discussed above, are such programs. Defining outcome or output measures that capture quality of life or measure changes in public health or air quality in a meaningful way can be a challenge. For example, knowing that obesity levels have decreased does not necessarily reveal if or how the livability program contributed. Similarly, knowing that a land banking program acquired ten new parcels of land near a planned transit station does not necessarily tell you why that level of output was achieved, nor does it tell you the contribution of this output to the end goal of creating a livable community.

For the purposes of this report, the focus is on measures of outcome, output, and process (efficiency and effectiveness), while taking the critique of such measures into consideration. The analysis seeks to consider how well the measures support leaders’ decision-making needs and provide a picture of both what was accomplished and why.

Implications for this Research

Overall, the criteria for good performance measures and performance measurement systems described in the literature are fairly consistent. For the purposes of this research, a synthesized set of seven criteria are applied to characterize the performance measures used by existing livability programs. These seven criteria cover the full range of criteria recommended by the literature discussed above. The criteria are: customer-focused; aligned to strategy, goals, and objectives; clear and unambiguous; measurable efficiently and accurately; balanced; decision-oriented; and address key stakeholder perspectives. Table 1 demonstrates the alignment of these criteria to the criteria recommended by the literature.

Table 1. Synthesis of Criteria for Good Performance Measurement

Summary Criteria	National Performance Review ^a	TCRP 88 ^b	VanLandingham ^c
Customer focused	<ul style="list-style-type: none"> Accepted by and meaningful to the customer 	<ul style="list-style-type: none"> Customer-focused 	<ul style="list-style-type: none"> Reflects customer's and organization's needs Lets us know if our customers are satisfied
Aligned to strategy, goals, and objectives	<ul style="list-style-type: none"> Tells how well goals and objectives are being met 	<ul style="list-style-type: none"> Linkage to goals 	<ul style="list-style-type: none"> Informs about progress and goal attainment
Clear and unambiguous	<ul style="list-style-type: none"> Simple, understandable, logical Unambiguously defined 	<ul style="list-style-type: none"> Clarity of performance reports to the intended audience 	<ul style="list-style-type: none"> Is easily understandable and easily interpretable
Measurable efficiently and accurately	<ul style="list-style-type: none"> Allows for economical data collection Produces reports at a reasonable cost Repeatable 	<ul style="list-style-type: none"> Reliability and credibility of the underlying data 	<ul style="list-style-type: none"> Is easily measurable
Balanced	<ul style="list-style-type: none"> Comprises a balanced set of limited, vital measures 	<ul style="list-style-type: none"> Variety of measures reflecting a broad range of issues and trended over time Number of measures, balancing variety with usability 	<ul style="list-style-type: none"> Is broadly applicable
Decision-oriented	<ul style="list-style-type: none"> Produces timely and useful reports Can be shared, understood, and used by an organization Sensitive Shows a trend 		<ul style="list-style-type: none"> Provides agreed upon basis for decision making Tells if, and where, improvements are necessary
Address key stakeholder perspectives	<ul style="list-style-type: none"> Supports the organization's values and its stakeholders' 	<ul style="list-style-type: none"> Stakeholder acceptance of the performance system 	

^a National Performance Review, "Serving the American Public: Best Practices In Performance Measurement" (June 1997) <http://govinfo.library.unt.edu/npr/library/papers/benchmark/nprbook.html> (accessed January 24, 2010).

^b Yuko Nakanishi, Kittelson & Associates, Urbitrans, Inc., LKC Consulting Services, Inc., Morpace International, Inc., and the Queensland University Of Technology, *A Guidebook for Developing a Transit Performance-Measurement System, Report 88 [TCRP 88] (Transit Cooperative Research Program, 2003).*

^c Gary VanLandingham, as quoted by Nicholas Compin (Associate Transportation Planner California Transportation Commission), in classroom presentation on November 3, 2009.

AGENCY MEASURES OF VALUE AND IMPACT

There is little written to date on what outcome metrics livability programs should use. Extensive research has been done on how each of type of stakeholder agency – such as transportation, housing and development, or environmental agencies – can measure their core missions. TOD programs and related efforts, such as EPA's Smart Growth Program, are examples of initiatives that go a long way in drawing the connections across multiple aspects of livability. Research has been done regarding the measurement of the desired outcomes of these programs, and this research can be very helpful in establishing metrics for a broader livability program.

Transportation and TOD Outcome Measures

Transportation agencies measure outcomes across a broad range of parameters. For example, the California Transportation Commission's guidelines for developing the State Transportation Improvement Program outline a set of indicators to be applied to both road and transit.³⁰ These measures fall into seven categories: safety, mobility, accessibility, reliability, productivity (throughput), system preservation, and return on investment/lifecycle cost. *Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners*, (TCRP 78) provides an overview of measures of transit benefits from multiple sources. Todd Litman's typology of 20 benefits of transit across three major categories (mobility, efficiency, and cost) aligned to the beneficiaries of each benefit.³¹ Beneficiaries include transit users, road users, the regional community, the environment, taxpayers, government agencies, pedestrians and cyclists, and "all of society."³² TCRP 78 also cites Williams and Lewis in outlining three major benefits of transit (low cost mobility, congestion management, and location efficiency) and three major beneficiaries (transit users, other travelers and community members, and society at large). Also cited in the report is a detailed benefit hierarchy by Biemborn et al., which places dozens of benefits into a framework of five categories: transit trips, fewer auto trips, provides alternatives, land use/economic activity, and transit supply.³³ The TCRP 78 authors conclude that, while all of these frameworks provide valid types of transit impact, measuring these impacts in a distinct way is not only difficult, but does not reflect the customer perspective of transit benefits. Riders, they argue, do not disaggregate the variety of travel costs and benefits when making a travel decision, so disaggregating them for measurement purposes is flawed.

Measuring and Valuing Transit Benefits and Disbenefits (TCRP 20), in its discussion of quality of life, comes a bit closer to finding measures more directly applicable to livability.³⁴ The report outlines 31 areas of impact from transit across the major categories of mobility and access, economic and financial, environmental and energy, safety and security, social equity, and "intangible factors." In order to provide what the authors term a "quality of life orientation," they state that a focus should be placed on "'fundamental' benefits, i.e., those characteristics that individuals and communities most want to consume more of, versus 'intermediate' benefits, i.e., those whose principal importance lies in the production of fundamental benefits."³⁵ In other words, measures should focus on the end outcome, not the intermediate outputs that are intended to create those outcomes. While access and mobility have long been key indicators for transportation agencies, the authors argue that these are intermediate benefits that are important, but not sufficient, in producing the fundamental benefits of economic, safety/security, and environmental impact.

The authors further argue that the fundamental benefits should be measured, as should the cost-effectiveness with which they are achieved and the equity of the distribution of the benefits.³⁶ The intermediate benefits should be measured but should not be seen as the primary goal. Rather, they are output measures that can inform evaluations of the outcomes. As noted above, such outcomes can be difficult to measure, especially when the outputs of the program in question are only one set of factors influencing the outcomes. The authors acknowledge that this is the case with their "fundamental" benefits: mobility and access can have positive economic, safety/security, and environmental impacts, but many non-transportation factors also come into play.

The literature on TOD provides additional guidance for livability metrics. As Reconnecting America points out in *Realizing the Potential for Sustainable and Equitable TOD*, the livability goals outlined by the Interagency Partnership on Sustainable Communities align very closely to the objectives of TOD.³⁷

Belzer and Autler outline the most comprehensive set of potential metrics for TOD with 30 types of measures across six categories: location efficiency, value recapture, livability, financial return, choice, and efficient regional land-use patterns.³⁸ While they call out livability as one of the categories of metrics, they note that “At its core, transit-oriented development strives to make places work well for people.” In other words, livability is the fundamental mission of TOD. Therefore, the other categories of metrics can also inform livability programs. For example, value recapture and financial return can be quite useful as metrics for livability programs in general, as well as metrics for TOD programs. They also note that while livability is a very subjective term, and one that is defined differently in different communities and by different individuals, the creation of livability metrics can help communities articulate and measure their own localized definitions. This report explores the point further in the section on customer definitions of livability. Belzer and Autler’s full set of metrics are outlined in the Table 2.

Table 2. Belzer and Autler TOD Performance Criteria

Category Definition	Examples Cited
Location Efficiency: Making auto use an option, rather than a necessity	<ul style="list-style-type: none"> • Increased mobility choices (walking and bicycling as well as transit). • Increased transit ridership. • Good transit connections to the rest of the city and region. • Reduced auto use and reduced auto ownership. • Reduced transportation costs to individuals and households. • Sufficient retail development (quantity, quality, and diversity) to satisfy the basic daily needs of residents and employees in the area. • Ability to live, work, and shop within the same neighborhood.
Value Recapture: The translation of Location Efficiency into “direct savings for individuals, households, regions, and nations”	<ul style="list-style-type: none"> • Increased homeownership rates or more adequate housing, especially among borderline income groups. • Reduced individual and community spending on transportation and therefore greater discretionary individual and community spending.
Livability: “Measures of livability that relate directly or indirectly to transit-oriented development”	<ul style="list-style-type: none"> • Improved air quality and gasoline consumption. • Increased mobility choices (pedestrian friendliness, access to public transportation). • Decreased congestion/commute burden. • Improved access to retail, services, recreational, and cultural opportunities (including opportunities for youth to get involved in extra-curricular activities within the neighborhood). • Improved access to public spaces, including parks and plazas. • Better health and public safety (pollution-related illnesses, traffic accidents). • Better economic health (income, employment).

Table 2, continued

Category Definition	Examples Cited
Financial Return on the TOD Project	<ul style="list-style-type: none"> • For local governments: higher tax revenues from increased retail sales and property values. • For the transit agency: increased fare box revenues and potential ground lease and other joint development revenues. It is possible that in some cases increases in land value could cover a significant portion of the cost of transit investments. • For the developer: higher return on investment. • For employers: shorter and more predictable commute times, easier employee access. • A balance between financial return and other goals of TOD so that projects are not judged purely on their monetary return.
Choice in Housing, Retail, and Transportation	<ul style="list-style-type: none"> • A diversity of housing types that reflects the regional mix of incomes and family structures. • A greater range of affordable housing options. • A diversity of retail types. Diversity will necessarily be limited by the market area and the particular desires of the residents; however, this outcome could be measured in terms of how well the retail mix meets the needs and desires of the residents as they themselves define them. • A balance of transportation choices.
Efficient Regional Land-use Patterns	<ul style="list-style-type: none"> • Less loss of farmland and open space. • More suitable regional and sub-regional balance between jobs and housing. • Shorter commutes. • Less traffic and air pollution. • Station areas as that can serve as destinations as well as origins.

Source: All examples and quoted category definitions are direct quotes from Dena Belzer and Gerald Autler, "Transit Oriented Development: Moving From Rhetoric To Reality," *Strategic Economics* (The Brookings Institution Center on Urban and Metropolitan, June 2002), 8-17.

Other literature provides more detail on some of the same types of measures proposed by Belzer and Autler. For example, the CTOD report, *TOD 202: Station Area Planning: How to Make Great Transit Oriented Places* (TOD 202), notes several measures that represent indicators of transportation choice and outputs that can impact the desired outcomes of improved air quality and reduced congestion: transit ridership, pedestrian volumes, and trip generation rates.³⁹ TOD 202 also provides sample indicators for some of the economic impacts of TOD: development activity and retail sales.

While livability and TOD have similar objectives, TOD assumes that livability is best achieved through transit and density while other livability programs may not find these to be the primary strategies for improving livability. Rural livability programs, or programs in cities that are already transit-rich but still not "livable," may take a different perspective. While this report focuses on livability programs led by, or with the participation of, MPOs, success depends on the integration of multiple stakeholder objectives. Therefore, research on the metrics of programs led by other agencies, such as livable streets initiatives and EPA's Smart Growth Program can be informative.

Cities and Towns: Livable Streets Metrics

New York City is a prime example of a city that is transit-rich but still struggles with creating communities that residents define as "livable." A 2008 study published by Transit Alternatives notes that New York, like many other cities around the world, "is now employing livable streets as a central strategy to nurture a healthy population and support

local economies.”⁴⁰ The report cites multiple studies of the benefits of livable streets and lists the following outcomes that can be expected from successful livable streets initiatives: economic benefits such as increased property values and increased retail sales, health benefits such as increased outdoor activity and reduced air pollution, and stronger, livelier neighborhoods. Outcome metrics for tracking these goals include lower rates of obesity and diabetes, reduced noise and air pollution, and increased size of the social networks of residents. The authors also outline detailed output measures and design specifications that they argue are indicators of the outcomes livable streets initiatives seek. These include measures such as pedestrian volume (high enough to be vibrant, but not so high as to create pedestrian congestion, as one sees in New York’s Times Square), density of stationary activities (such as sitting on café chairs), pedestrian diversity (more women, children, and elderly residents on the street is an indicator of safety, comfort, and accessibility), social interaction and social contacts (such as the number of neighborhood residents with which one is acquainted), ownership/pride (such as participation in block parties and community gardens). The authors also recommend health- and economic-related output measures such as vehicle speeds, traffic volume, and retail foot traffic.⁴¹

The authors note that many of these factors may be difficult to measure and that outcomes such as reduction in obesity rates are influenced by many factors outside of the scope of the livable streets program. In addition, they note that many of the factors (such as the number of social contacts) may change very slowly over time. The authors point the reader to specific studies that can provide methodologies for making the measurements while also recommending that planners focus on the more measureable of the factors outlined above, such as pedestrian behavior and vehicle speeds.⁴² Of course, choosing the more measureable factors often results in having to rely on output measures, such as pedestrian volume, rather than outcome measures, such as reduced obesity.

The Intersection of Development and Environment: Smart Growth Metrics

Smart growth has been EPA’s focus for addressing livability objectives at the intersection of development and environmental concerns.⁴³ The EPA’s Smart Growth Program Website provides a wealth of information on measuring smart growth, including scorecards for projects and municipalities. A full analysis of the measures in the scorecards is outside the scope of this report, but a summary of the types of measures included is informative.

In general, the EPA recommends considering the social, economic, aesthetic, and environmental impact of development projects on the community.⁴⁴ The scorecards, which are not endorsed by the EPA but posted as references, address topics such as density, mix and balance of uses, type of location, proximity and quality of transit/bicycling/pedestrian options, community character, connectivity/accessibility, and economic development impact.

The Intersection of Transportation and Development: The Housing and Transportation Affordability Index

In the definition of their “livability principles,” the IPSC includes a goal of “lower[ing] the combined cost of housing and transportation.” Many livability programs that involve both transportation and development agencies outline similar goals.⁴⁵ The CTOD Housing and

Transportation Affordability Index, or simply Affordability Index, was developed to measure this outcome. The goal was to establish a measure that “prices the trade-offs that households make between housing and transportation costs, and the savings that derive from living in communities that are near shopping, schools, and work, and that boast a transit rich environment.”⁴⁶ The study concludes that most measures currently in use for evaluating the affordability of housing, and therefore allocating incentives such as housing tax credits and housing vouchers, do not include the cost of transportation even though transportation cost is highly correlated with a neighborhood’s characteristics. The Affordability Index establishes for a given census block the sum of housing and transportation costs divided by average income. The transportation costs are estimated in three parts: cost of auto ownership, auto use, and transit use. These three cost categories are dependent variables in a model that combines nine independent variables representing the built environment and household characteristics. The study shows that these nine variables, when applied at the census block level, can reasonably predict the dependent variables. The independent variables are as follows: households per residential acre, households per total acre, average block size, transit connectivity index (a measure of frequency and location of transit established by the Center for Neighborhood Technology), distance to employment centers, jobs per square mile, access to amenities (based on the number of service jobs), household income, and household size.⁴⁷

As discussed later in the Conclusions and Recommendations chapter, for the livability programs studied, the Affordability Index has, so far, only been applied to demonstrate the need for livability investments. However, it could also be used as an outcome measure if applied before and after a program investment.

Implications for this Research

The literature provides a strong starting point for a list of potential areas for performance measurement of livability programs. In addition, the literature reinforces the idea that measures should be broken down into outcomes, outputs, and processes (“fundamental benefits,” “intermediate benefits,” and “cost effectiveness” in the language of TCRP 78).⁴⁸ A summary of the measures described above is outlined in the table 3 on the following page. As Belzer and Autler point out, however, livability is subjective and the goals and objectives of livability programs vary greatly. Therefore, this list should not be used as a standard for measures that each program should have, but as a source of ideas for measures that programs may wish to have given their specific goals and objectives.

Table 3. Synthesis of Agency Measures of Value and Impact

Category	CTC Guidelines ^a	TCRP 78 and 20 ^b	Belzer and Autler ^c	Livable Streets/ Smart Growth/ Affordability Index ^d
Outcome	<ul style="list-style-type: none"> Safety 	<ul style="list-style-type: none"> Low cost mobility Congestion management Location efficiency Economic Safety/ security Environment 	<ul style="list-style-type: none"> Economic (home ownership rates, reduced transportation cost, economic health aspect of livability) Environmental (air quality aspect of livability) Congestion (aspect of livability) Efficient Regional Land-use Pattern outcomes (less loss of open space, shorter commutes, air quality, congestion) 	<ul style="list-style-type: none"> Economic (increased property values, increased retail sales) Health and environmental (rates of obesity and diabetes, noise and air pollution, traffic injuries) Social (increased size of the social networks of residents) Affordability: Combined cost of transportation and housing, in relation to average income (Affordability Index)
Output	<ul style="list-style-type: none"> Mobility Accessibility Reliability Productivity (throughput) System preservation 	<ul style="list-style-type: none"> Mobility Access Efficiency of transit Cost of transit Transit trips Fewer auto trips Provides alternatives Land use/ economic activity Transit supply 	<ul style="list-style-type: none"> Choice in housing, retail, and transportation Mobility choices and access (livability outputs of TOD) Efficient Regional Land-use Pattern outputs (job housing balance, stations that are origins and destinations) Location efficiency: making auto use an option rather than a necessity 	<ul style="list-style-type: none"> Pedestrian volume and diversity Density of stationary activities Social interaction and social contacts Ownership/pride (participation in block parties and community gardens) Safe conditions (vehicle speeds and traffic volume) Retail foot traffic Aesthetic/ community character Mix and balance of uses Proximity and quality of transit/ ped/bike options Connectivity/accessibility Density of housing and jobs
Process	<ul style="list-style-type: none"> Return on investment/ lifecycle cost 		<ul style="list-style-type: none"> Financial return on the project (tax revenues, fare box return, lease revenues, developer ROI, attractiveness to employees, balance between financial return and other goals of TOD) 	

^a California Transportation Commission, State Transportation Improvement Program (STIP), "Adoption of 2010 State Transportation Improvement Program (STIP) Guidelines" (memorandum, October 14-15, 2009), http://www.catc.ca.gov/programs/STIP/historical/2010_STIP_Guidelines_G-09-11.pdf (accessed July 13, 2013).

^b Cambridge Systematics, Inc. and Apogee Research, Inc., *Measuring and Valuing Transit Benefits and Disbenefits*, TCRP Report 20 (Washington, D.C.: Transportation Research Board – National Research Council, National Academy Press, 1996); *Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners*, TCRP Report 78 (Washington, D.C.: Transportation Research Board – National Research Council, National Academy Press, 2002).

^c Dena Belzer and Gerald Autler, "Transit-Oriented Development: Moving from Rhetoric to Reality" *Strategic Economics* (Brookings Institution Center on Urban and Metropolitan, June 2002).

^d Lindsey Lusher, Mark Seaman, and Shin-pe Tsay, *Streets to Live By: How Livable Street Design Can Bring Economic, Health, and Quality-of-Life Benefits to New York City* (New York, NY: Transit Alternatives, August 2008), http://transalt.org/files/newsroom/reports/streets_to_live_by.pdf (accessed July 13, 2013).

THE CUSTOMER AND DEVELOPER PERSPECTIVE

In *Realizing the Potential: Expanding Housing Opportunities near Transit*, Reconnecting America's CTOD states that the demand for housing near transit by individuals from a range of income brackets will increase in the coming decades.⁴⁹ "A conservative estimate is that by 2030, nearly a quarter of those seeking housing, or over 16 million households, will express a demand for living near fixed-guideway transit."⁵⁰ This predicted demand is due in part to demographic shifts: "The types of households who tend to seek out TOD – singles, couples without children, the elderly and low income minority households – are also the types of households that are projected to grow the most over the next 25 years."⁵¹ These projections mean that "livable" communities, as defined by the Interagency Partnership on Sustainable Communities and similar programs, will be in higher demand in the future.

The challenge, CTOD argues, is that building such communities is costly and risky. Developers will only develop such communities if they can sell or rent the units for premium prices. "Lack of ready-to-develop land, high land costs near transit, absence of TOD supportive land use and rigid parking requirements, and lengthy entitlement processes for development all combine to push private sector developers to the high end of the housing market where there is more margin to absorb the time, uncertainty and cost of risk inherent in TOD."⁵²

This dynamic pits the objective of affordability against the need for developers to achieve a competitive return from their investments at a reasonable level of risk. CTOD and others recommend that programs seeking to enhance the affordability of housing near transit (one of the goals of the Interagency Partnership on Sustainable Communities and other livability programs) consider strategies that will close this gap. They recommend helping to reduce the costs of development (e.g., through subsidies) and/or the risks of development (e.g., through land banking to transfer the risk of long-term holding of land near potential transit stations from developers to the government).⁵³ While a full analysis of the barriers to livability and of the strategies for addressing such market dynamics is outside the scope of this report, it is clear that any program designed to address livability is fundamentally seeking to fulfill, or create, a demand from residents for a particular type of community and to encourage, or require, developers to take actions to invest in developing such a community. As such, livability programs must take into consideration the customer and developer perspectives in their strategic and operational decisions, and therefore must have performance measures that provide insight into those perspectives.

Aligning Developer and Agency Goals

In theory, the developer perspective is quite straightforward. Developers commonly use five metrics to evaluate the success of a project: total return, income return, capital return, market value, and net operating income.⁵⁴ Developers seek to achieve a return on investment that matches or exceeds that of other potential uses of their funds. Even if investing in a livable community provides a positive return, if investing in high-end suburban development provides a higher return, the developer will choose to spend limited investment on that development. In addition, developers must consider a "risk-

adjusted” return. Further, even if a livable project might have a much higher return than another project, if the livable project has higher risk (e.g., the location of a transit station is uncertain, so purchasing land near the potential station may pay off, but may result in a loss if the station is not built), developers will factor this risk into their decisions about which project to undertake. The challenge comes in predicting the returns and quantifying the risks.

In an effort to evaluate whether Responsible Property Investment (RPI) can provide competitive returns, Pivo and Fisher analyzed the historical risk-adjusted returns of a portfolio of office properties that met three criteria for RPI: energy efficient, transit-oriented, and urban regeneration. They found that a portfolio of RPI properties performed as well as, if not better than, a portfolio of non-RPI properties in terms of ten year risk-adjusted returns.⁵⁵ Thus, measuring the risk-adjusted investment return of livable property investments is possible and can contribute to formulating and evaluating strategies for livability programs.

Pivo convened a panel of experts from both the real estate industry and the social investment industry in 2007 to develop a set of criteria for socially responsible property investing that reflects both the financial performance priorities of investors and the value to the public interest of a development project.⁵⁶ The result was a list of 66 criteria ranked in terms of their impact on “materiality” (importance to investors’ investment decisions) and “public interest” (“ethical issues and externalities relevant to the general welfare”).⁵⁷ The priority order of the criteria differs significantly depending on whether one ranks the list based on materiality or on public interest. Five criteria made the top ten under both ranking systems: “energy efficiency and conservation;” “high level of public transport services;” “TOD;” “daylight and natural ventilation;” and “contributes to higher density, mixed-use, walkable places.” This finding indicates that these factors, or potential output measures, may provide significant common ground between agencies and the developers they seek to influence to build livable communities.

Customer Perspectives on Livability

The real estate industry puts a great deal of effort into attempting to measure customer preferences, as returns are higher when developers focus on features customers will pay for. This customer research can be beneficial to agencies pursuing livability goals. While some aspects of the public interest, such as equity or air quality, may be externalities that are not fully reflected in the individual choices people make about housing location, a significant part of livability is ultimately about what residents define as a good place to live. Even with livability factors that reflect externalities such as air quality, the customer perspective is critical. For example, access to transit will only result in lower emissions if access to transit is valued by residents and translates into fewer vehicle miles traveled (VMT).

Resident preferences vary significantly across geographies and demographic groups, but several national trends bode well for advocates of dense, mixed-use, transit-oriented communities. The Urban Land Institute and PricewaterhouseCoopers’ *Emerging Trends in Real Estate 2010*, a study based on a survey of more than 900 real estate industry

professionals, describes such communities as a “best bet” for developers, based on the survey results.⁵⁸

The report forecasts that future projects will tend to favor livability-related criteria:⁵⁹

Next-generation projects will orient to infill, urbanizing suburbs, and transit-oriented development. Smaller housing units—close to mass transit, work, and 24-hour amenities—gain favor over large houses on big lots at the suburban edge. People will continue to seek greater convenience and want to reduce energy expenses. Shorter commutes and smaller heating bills make up for higher infill real estate costs. ‘You’ll be stupid not to build green.’ Operating efficiencies and competitive advantage will be more than worth ‘the minimal extra cost.

The authors note that investors are favoring urban areas and “urbanizing infill suburbs” that offer “upscale, pedestrian-friendly neighborhoods; convenient office, retail, entertainment, and recreation districts; mass transit alternatives to driving; good schools (public and/or private); and relatively safe streets, and note that investors are shying away from secondary cities and exurbs with “long car commutes.”⁶⁰

Clearly, the preference for investing in “upscale” communities is at odds with agency objectives for equity and affordability, but the trend toward urbanization and reduced driving is consistent with other transportation and environmental agency objectives. While part of the preference for “upscale” may reflect a customer demand for a certain type of community, it also reflects the investor bias for communities with a price premium that investors can benefit from.

“Best places to live” types of indices are intended to appeal more directly to customer preferences and include affordability as a key criterion. These indices range from rigorous analytical studies, such as the Mercer Quality of Living Survey,⁶¹ to lists generated by expert input for popular magazines such as *U.S. News and World Report*, *Money Magazine*, and *Forbes*.⁶² All of the lists acknowledge that the relative weighting of the livability factors are very subjective and vary based on demographics and individual preferences. The indices are remarkably consistent in the types of criteria they include. In addition to aspects of the natural environment – which livability programs cannot impact directly – they also include economic characteristics such as average income, availability of quality health and education resources, access to public services and public transportation, access to recreational activities, social factors such as safety, and total household costs. Many of the indices created for popular magazines include sub-indices (e.g., *Forbes*’ Best Downtowns for Empty-Nesters and Best Cities for Singles). Some also provide interactive features allowing the reader to prioritize the criteria to generate a personalized list. The sub-indices reflect the reality that the factor weighting is subjective, but also provide some insight into more finely honed criteria that may be worth consideration. For example, Best Cities for Singles includes a culture index that factors in the number of cultural and sporting venues per capita in the metro area and a nightlife index that looks at bars and nightclubs per capita. Empty-Nesters weights property tax considerations more highly.⁶³

Beyond the broad trend data provided by the real estate industry and the characteristics of livable communities provided by best-places-to-live indices, scholars and public agencies often engage in detailed studies of housing choices in a particular city or region in relation to factors such as access to transit. For example, Smart Growth America and the National Association of Realtors commissioned a report in 2004 to measure community preferences regarding density versus sprawl and community diversity (generational and economic), which provides regional-level data.⁶⁴ Bina, Kockelman and Suescun's study of location choice in relation to transportation in Austin, Texas, provides detailed insight into customers' perspectives in that city.⁶⁵ The Metropolitan Transportation Commission initiated a study of the impact of factors such as transit and mixed-use on housing choice in the San Francisco Bay Area to help guide their livability program and other priorities.⁶⁶

Each agency pursuing livability goals can look at, or commission, detailed local research on current and future resident preferences to help define performance measures. Such research can be used as an input to framing options that can then be refined through the extensive public involvement that is required by law for both land-use and transportation planning at the regional and local levels.

Implications for this Research

The literature provides a broad set of criteria that are important to developers and residents. It also provides insight into the type of customer demand that investors are interested in meeting: the type of demand that investors believe will provide an adequate risk-adjusted return. A synthesis of the customer-oriented criteria is presented Table 4, while Table 5 shows the criteria from the developer perspective. For programs seeking to close the gap between increased demand by residents for livable communities and the willingness of developers to meet that demand, these criteria can serve as a starting point for determining how to close the gap.

Table 4. Synthesis of Customer-Oriented Livability Measures

Factor	Type of Customer Demand Investors See as High Return	Best Places to Live
Economic	<ul style="list-style-type: none"> Upscale Total household costs (including, e.g., higher housing costs versus shorter commutes and smaller heating bills) 	<ul style="list-style-type: none"> Average income Total household costs
Location	<ul style="list-style-type: none"> Urban Infill Urbanizing suburbs 	<ul style="list-style-type: none"> NA (indices focus on a single type – e.g., cities)
Amenities	<ul style="list-style-type: none"> Office Retail Entertainment 24-hour amenities Pedestrian friendly Recreation Schools (public and/or private) Transit access/TOD 	<ul style="list-style-type: none"> Health Public services Recreation Schools Transit
Housing Type	<ul style="list-style-type: none"> Smaller units 	<ul style="list-style-type: none"> NA
Quality of life	<ul style="list-style-type: none"> Safe 	<ul style="list-style-type: none"> Safe

Note: Table content is authors' synthesis of all works cited.

Table 5. Developer/Investor Outcome Measures

- Total return
- Income return
- Capital return
- Market value
- Net operating income

Source: Gary Pivo, Jeffrey D. Fisher, *Investment Returns from Responsible Property Investments: Energy Efficient, Transit-oriented and Urban Regeneration Office Properties in the US from 1998-2007* (Bloomington, IN: Benecki Center for Real Estate Studies, 2008).

SUMMARY OF IMPLICATIONS FROM LITERATURE REVIEW

Livability is a complex and subjective topic. Many agencies have established definitions and principles for livable communities, but each livability program has its own sets of goals, objectives, and strategies. As such, no single set of livability performance measures can be applied as a one size fits all solution. New livability programs can apply criteria for what makes a good measure and draw from the types of measures other programs have applied in order to identify ideas as to what can, or should, be measured.

The literature review above provides a broad perspective on the definitions of livability, criteria for good metrics in customer facing programs, and a discussion of a wide range of metrics that can be applied to livability and related programs. These insights were applied to an analysis of the performance measurement approaches actually applied by five existing livability programs: Atlanta Regional Commission's Livable Centers Initiative, Metropolitan Council's Livable Communities Act Grant Program (Minneapolis-St. Paul

metropolitan area), Metro's Transit-Oriented Development and Centers Program (Portland, Oregon, metropolitan area), North Central Texas Council of Governments' Sustainable Development Initiative, and Metropolitan Transportation Commission's Transportation for Livable Communities Program (San Francisco Bay Area).

For each of these, program documentation was analyzed and program leadership was interviewed. The goal of the analysis was to answer the research questions of this report: How should agencies measure the performance of livability programs? What can, and should, new livability program planners learn from existing livability programs' approaches to performance measurement? To what degree are the performance measurement approaches of existing livability programs aligned to the objectives of the programs, to their stakeholders, and to recommendations for good performance measurement? The findings, conclusions, and recommendations from this analysis follow.

IV. PROGRAM ANALYSIS

OVERVIEW OF PROGRAM ANALYSIS

The reviewed programs use a wide range of different approaches to performance measurement, including detailed annual or biennial reports (at the Metropolitan Council (MC) in Minneapolis-St. Paul and the Atlanta Regional Commission; periodic program evaluations at the Metropolitan Transportation Commission in San Francisco), and a streamlined set of measures incorporated into the call for project proposals (for the North Central Texas Council of Governments). Oregon Metro started with a very detailed set of reports and scaled down as resources tightened.

Each program reports on the sources and uses of funds as well as the volume of development activity produced by the program. While some characterize that development based on the livability goals, reporting on factors such as affordability, walkability, and use-mix, most programs do not capture all of their livability goals or all of the customer criteria for livability in their development activity statistics. Often, livability goals are assumed to be achieved because the projects were selected based on the agency's ability to achieve them. Most programs also report on financial return factors such as changes in land value and jobs created. Beyond these commonalities, the factors reported across programs are very diverse.

In discussing performance management approaches with the leaders of each program, four specific measurement types were called out by interviewees as having been particularly useful in supporting program decisions: delivery of project commitments (did we get what we funded?); the percentage of the region's development that occurs in targeted development areas (are we developing where we want to develop?); leveraged funding (did we close the development financing gap?); and transportation access factors such as induced ridership, cost per induced rider, and bicycle and pedestrian access (did we achieve a transportation land-use link?).

The Atlanta Regional Commission's (ARC) approach is notable for its balance of quantitative and qualitative factors, which address a broad range of outcome, output, and processes in a consistent, trended biennial report. The set of reports provides rich examples of good measures as well as lessons on how to achieve breadth and balance in an efficient, affordable manner.

MC, in contrast, is a strong example of focusing on a smaller set of very clear, quantifiable measures of project delivery. Their practical approach to assuring and demonstrating that projects achieve what they set out to achieve also speaks to a wide range of stakeholders: legislators, advocates of affordability, environmentalists, and the local jurisdictions that are program grantees.

Oregon's Metro (known, simply, as Metro) started with a very comprehensive set of measures for outcome, output, and process. Although Metro has since scaled back reporting due to the cost of comprehensive measurement, their reports provide an abundance of examples

of potential measures and indicators for almost any livability factor a program might seek to achieve.

The North Central Texas Council of Governments (NCTCOG) provides an example of how to make livability come to life through case study style reporting. In addition to summary statistics on basics such as sources and uses of funds, their published reports provide rich examples of the types of projects they fund, capturing the spirit of livability.

San Francisco's Metropolitan Transportation Commission (MTC), like ARC, is notable for its broad and balanced set of measures, mixing quantitative and qualitative factors, rigorously addressing each program goal, and addressing a wide range of stakeholders. What sets MTC apart is its strong decision-orientation. MTC takes a periodic performance evaluation approach and uses the opportunity to determine what strategic decisions need to be made and what analysis should be done to support those decisions. The reports provide both data and analysis of the dynamics behind the numbers and make specific recommendations for program improvements. While many of the measures are consistent from one evaluation to the next, MTC does not constrain itself to a pattern of regular reporting measures, but adapts the evaluation to the program needs at the time.

Table 6 provides a summary of each program reviewed, its goals, and the performance measures it applies. The following section provides a detailed analysis of the performance measurement approach of each of the programs reviewed against the criteria for good performance measurement identified in the literature review above: customer focus; alignment to strategy, goals and objectives; clarity; measurability (efficiency and accuracy); balance; decision-orientation; and ability to address key stakeholder perspectives. More detailed data on each program and its reporting scheme is included in the appendix. This report ends with conclusions and recommendations based on the analysis of the programs.

Table 6. Overview of Livability Programs Analyzed

Agency/ Program/ Agency Type	Goals	Strategies	Process Metric Categories	Output Metric Categories	Outcome Metric Categories
Atlanta Regional Commission (ARC) Livable Centers Initiative (LCI) COG and MPO – led by land use division, with transportation funding	<ul style="list-style-type: none"> Mixed income Mixed use Walkability & transport options Safety Sense of place Quality of life Reflect the goals of the community 	<ul style="list-style-type: none"> Joint planning Zoning and other policy changes Funding (planning and transportation projects) 	<ul style="list-style-type: none"> Source and uses of funds Implementation (e.g., barriers, success factors, approaches) Project status, by type 	<ul style="list-style-type: none"> Private development <ul style="list-style-type: none"> Volume Percent in LCI areas Alignment to goals Land use policy and regulation changes Modeled outputs (based on project plans): <ul style="list-style-type: none"> Street rte. directness Use mix and balance Jobs housing ratio VMT 	<ul style="list-style-type: none"> Livability improvement perceptions (grantee survey) Modeled outcomes (based on project plans): <ul style="list-style-type: none"> Employment & population density Emissions
Metropolitan Council (Minneapolis-St. Paul Metro Area) Livable Communities Act (LCA) Grant Program COG and MPO – led by planning and development unit	<ul style="list-style-type: none"> Job creation/ economic development Affordability Mixed income Density Links among housing, jobs, and transit 	<ul style="list-style-type: none"> Planning for affordability Funding for <ul style="list-style-type: none"> Land cleanup Development/ redevelopment Land banking 	<ul style="list-style-type: none"> Source and uses of funds (incl. geo. equity) Evidence of demand (oversubscription of funding) Efficiency/ Return on Investment <ul style="list-style-type: none"> Investment leveraged New tax capacity 	<ul style="list-style-type: none"> Private Development <ul style="list-style-type: none"> Volume Affordability Local government policy changes 	<ul style="list-style-type: none"> New or retained jobs Acres of polluted land reclaimed Quality of life (qualitative project descriptions)
Metro (Portland Oregon Metro Area) Transit-Oriented Development and Centers Program COG and MPO – transportation funded	<ul style="list-style-type: none"> Increased transit/ walking/biking Cost effectiveness Air quality Reduced auto congestion Economic development Housing and transportation options Location efficiency Return to developers 	<ul style="list-style-type: none"> Public investments to private developers, to “close the gap” <ul style="list-style-type: none"> Land acquisition Purchasing TOD easements Site improvements Green building Education, Advocacy and Technical Assistance 	<ul style="list-style-type: none"> Source and uses of funds (incl. geo. equity) Efficiency/ Return on Investment <ul style="list-style-type: none"> Cost per induced rider Net present value of future farebox return Cost premium for livable development Investment leveraged 	<ul style="list-style-type: none"> Private development <ul style="list-style-type: none"> Volume Affordability Use Efficient land use: <ul style="list-style-type: none"> Change in density Mixed use Transportation choice <ul style="list-style-type: none"> Use growth by mode Capital needs v. spending by mode Housing options <ul style="list-style-type: none"> Size/type Affordability 	<ul style="list-style-type: none"> Economic development <ul style="list-style-type: none"> Land values Goods movement Jobs growth Environmental Protected land Air quality Waste reduction Quality of life Park acres per capita Protection of land

Table 6, continued

Agency/ Program/ Agency Type	Goals	Strategies	Process Metric Categories	Output Metric Categories	Outcome Metric Categories
North Central Texas Council of Governments (NCTCOG) Sustainable Development Initiative (SDI) COG and MPO – led by transportation unit	<ul style="list-style-type: none"> ▪ Density ▪ Mixed use ▪ Rail and walking options ▪ Housing-Income Match ▪ Job Creation 	<ul style="list-style-type: none"> ▪ Funding: <ul style="list-style-type: none"> – Development – leveraging private funds (PPP projects) – Planning – Land banking ▪ Best practice sharing 	<ul style="list-style-type: none"> ▪ Source and uses of funds (incl. geo. equity) ▪ Case descriptions of select programs with some or all of the following: <ul style="list-style-type: none"> – Value of public and private investments – Change in property value and resulting revenue 	<ul style="list-style-type: none"> ▪ Transportation infrastructure development activity (volume) ▪ Case descriptions of select programs with some or all of the following: <ul style="list-style-type: none"> – Acreage – Use mix – Units – Transit access features 	<ul style="list-style-type: none"> ▪ Case descriptions of select programs sometime include jobs created
Metropolitan Transportation Commission (MTC) (San Francisco Bay Area) Transportation for Livable Communities (TLC) MPO only (not COG)	<ul style="list-style-type: none"> ▪ Joint planning ▪ Transportation choice ▪ Mixed use/ density near transit ▪ Revitalization/infill ▪ Quality of life/sense of place 	<ul style="list-style-type: none"> ▪ Funding: <ul style="list-style-type: none"> – Joint planning – Transport infrastructure tied to goals – Rewards for development meeting goals with transport funding 	<ul style="list-style-type: none"> ▪ Source and uses of funds (incl. synergies across programs) ▪ Evidence of demand (grantee perception of adequacy of grant) ▪ Efficiency/ Return on Investment <ul style="list-style-type: none"> – Investment leveraged ▪ Grantee perception of efficiency of program elements in achieving goals 	<ul style="list-style-type: none"> ▪ Grantee perception of effectiveness of program elements in achieving goals <ul style="list-style-type: none"> – Volume – Affordability – Proximity 	<ul style="list-style-type: none"> ▪ Grantee perception of effectiveness of program in achieving goals

ATLANTA REGIONAL COMMISSION – LIVABLE CENTERS INITIATIVE

Program Description

The Atlanta Regional Commission's (ARC) Livable Centers Initiative (LCI) "encourages local jurisdictions to plan and implement strategies that link transportation improvements with land-use development to create sustainable, livable communities."⁶⁷ The goal of the program is to encourage development that is mixed income, mixed-use, walkable, multi-modal, safe, that provides a sense of place and quality of life, and that reflects the goals of the community.

LCI has two primary program elements. First, LCI provides planning grants to local jurisdictions and non-profits to undertake planning and pursue policy changes in concert with the LCI objectives. Second, priority funding is provided for transportation projects within the LCI study areas, if the policies established in the LCI plans are implemented.⁶⁸

ARC is a 150-person agency that serves as both the MPO (with transportation planning and funding authorities) and as the Regional Commission (with land-use planning responsibilities). LCI is managed by the land-use division but is funded with transportation money. As a result of the centralized management, the land-use and transportation divisions work together closely on the program.⁶⁹

LCI is cited in the livability literature⁷⁰ and mentioned by interviewees in other regions as a leading program. LCI has also received awards from a broad range of organizations including the American Planning Association, the Environmental Protection Agency, the National Association of Regional Councils, the Association of Metropolitan Planning Organizations, the Federal Highway Administration, and the Federal Transit Administration.

Reports Reviewed

Three performance reports were reviewed for this research. The *2009 LCI Implementation Report* (Implementation Report) is a biennial report on program execution results. It includes both quantitative project execution reporting from grantees and the results of a more qualitative survey of grantees.⁷¹ This report is produced by a planning intern with oversight from staff and takes approximately the full summer internship, as well as the fall term, to complete. *The 2009 Livable Centers Initiative Indicators and Benefits Study* (Indicators and Benefits Study), also a biennial report, applies a quantitative model to a subset of LCI plans to model outcomes such as population and employment density, use-mix and balance, and vehicle greenhouse gas emissions.⁷² This report is produced by staff and does not require a significant investment of time. *The 2009 LCI Breaking Ground Report* (Breaking Ground) is a semi-annual, process-oriented report.⁷³ It provides a list of current projects with descriptions and project status, as well as a summary of the projects by status and a summary of sources and uses of funds. Unless otherwise noted, data in this section are from a synthesis of these three reports. Except where interviewees are directly cited, all analysis, conclusions, and opinions are the authors' own, and do not necessarily reflect the position of the agency reviewed.

Analysis

Customer Focus

ARC reports on the broadest set of factors important to customers, which include access to retail, restaurants, and personal services; pedestrian and transit options and activity; jobs-housing balance; density; and bicycle and pedestrian safety. In addition, ARC explores – through a survey of grantees – the softer side of livability. For the Implementation Report, grantees are asked to rate their agreement with the statement: “the LCI study area is more livable since the completion of the LCI study.” Like all of the other programs analyzed, ARC does not report on access to schools, health services, or recreation – all factors that both the real estate industry’s analysis of demand and the Best Places to Live indices indicate are important to residents. In addition, while the reports provide information on the development of senior-living and affordable housing projects, they do not directly address the customer perspective on economic issues such as total household cost, average income, or demand for “upscale” development in urban or urbanized suburban areas. If customers are willing to trade higher housing costs per square foot for lower commute and energy costs, as is indicated in the real estate industry’s demand surveys and the Best Places to Live indices, ARC is not directly capturing whether LCI development provides this balance.

In addition, ARC does not directly survey residents to determine whether the program is meeting their needs. Rather, the survey asks the grantee to comment on these factors. Therefore, VanLandingham’s criterion that measures customer satisfaction is not fully met. None of the programs analyzed regularly surveys residents, but the planning process undertaken by grantees requires significant public outreach. This may enable grantees acquire information concerning whether they are meeting the community’s needs.

Alignment to Strategy, Goals, and Objectives

ARC’s measures directly tie to the goals outlined for the program. The goals of mixed-income, mixed-use, walkable, transit-accessible, and safe communities are all explicitly measured through the questions in the grantee survey, and many are also measured quantitatively. The purpose of the program – to help planners and local jurisdictions to plan and implement development oriented toward these goals – is also measured through surveys and statistics on land-use and policy changes. The grantee survey also provides some qualitative evidence on the less measureable goals of sense of place and quality of life. ARC does not directly report on the success of LCI’s final objective – to “reflect the goals and vision of the community.” Rather, that goal is presumed met because the process involves significant public involvement.

ARC’s primary strategy – funding joint planning and implementation with a focus on zoning and other policy barriers – is directly measured in the Implementation Report and in the Breaking Ground Report. Both reports provide measures regarding the results of development itself and the Implementation Report also provides statistics on changes in zoning and regulation. The Implementation Report does not directly measure whether those zoning and policy changes were critical to removing barriers to livable development.

ARC measures whether the program had the intended outputs on the policy side, but does not measure whether those policy outputs were critical to the development outputs and outcomes.

ARC's survey of grantees does ask about the factors that contributed to the success of the program as well as collecting data about the implementation organization structures and other funding sources. These questions provide data for ARC to evaluate whether they are focusing on the right strategies and mechanisms to achieve LCI's end goals.

Clarity

ARC's performance reports are clear, direct, and provide an explanation of the sources and methodologies behind each measure. The full set of questions from the grantee survey and full statistics are provided in the Implementation Report. A number of the questions in the grantee survey do require interpretation by the respondent and do not provide completely unambiguous results. However, many of these questions are by nature difficult to make unambiguous. For example, the survey asks whether the LCI area is more "livable" after program implementation. While the result of this survey may not be completely unambiguous, they do provide value to ARC and avoid the pitfall of only measuring, and therefore only pursuing, the most concrete goals.

Measurability – Efficiency and Accuracy

ARC relies primarily on self-reported data from grantees, the results of grantee surveys, and modeling. These activities are efficient in comparison to customer surveys and measurements such as pedestrian counts, as suggested in the literature discussed in this report's section, Cities and Towns: Livable Streets Metrics.⁷⁴ However, customer surveys and direct observations or counts may provide more accuracy. Fundamentally, ARC is balancing efficiency and available resources with depth of analysis. While program leadership would like to measure outcomes and outputs directly or survey residents, the cost of adding these measures would be significant.⁷⁵

Balance

ARC's measurements span the majority of the LCI program goals and cover outcome, output, and process measures. Results are trended, with comparison between the current and previous reporting period. The Implementation Report provides a summary section, a narrative to provide context and interpretation of the data, and is of a length that is easy to interpret by program leaders and board members while providing a thorough set of data and insights. The Indicators and Benefits Study models the types of development and outcomes that are likely to be achieved. The Breaking Ground Report provides process measures on the execution of individual projects. Providing three distinct reports allows readers with different agendas and perspectives to choose the report that suits their needs.

Decision-Orientation

The Implementation Report and the Indicators and Benefits Report are both biennial and, as such, are well-timed for strategic program reviews. They are not intended to support mid-year course corrections, but rather to help program leaders and board members set policy and to provide evidence of program effectiveness to the public and to grantees. The intended audience of both reports is broad and includes program sponsors, the ARC Board of Directors, the state Department of Transportation, and peer programs seeking advice.⁷⁶

Internally, the Implementation Report is used to support decision-making on program direction. For example, the measure that shows the percentage of the region's development that occurs within the LCI areas was recently used to support a decision to refocus the program. The team found that LCI was capturing a high percentage of office space development, but not as high of a percentage of housing development as they had hoped. As a result, more focus was placed on housing development. The team is considering adding a new measurement of the "halo effect" (defined as development just outside the formal boundaries of an LCI area) to determine whether housing development is higher in these boundary areas. This nearby development, while not in LCI areas, would support LCI goals of reducing VMT and greenhouse gas emissions.⁷⁷

The Breaking Ground Report is tailored to more tactical decision-making; ARC tracks project progress on a monthly basis and publishes the data in the Breaking Ground Report every six months. This provides regular process measurement that would support tactical decisions to improve execution.

Address Key Stakeholder Perspectives

The key external stakeholders for LCI are customers, policy makers, grantees from local jurisdictions, and developers. Policy maker concerns are addressed via all of the given reports, from confirmation of execution progress in the Breaking Ground Report to policy outcome projections in the Indicators and Benefits Report. Grantee perspectives are thoroughly covered based on the grantee survey and self-reporting of results. Developer perspectives are not directly addressed. ARC indirectly measures developer interest in LCI areas by measuring the LCI area development as a percentage of the total development in the region. ARC does not, however, measure whether the zoning and regulation changes make developers more willing to invest in an area due to the increase in the risk-adjusted return of the developers. ARC does not directly measure whether the program outputs (policy change) contributed to the development outputs (attraction of livable development).

METROPOLITAN COUNCIL (MINNEAPOLIS-ST. PAUL METROPOLITAN AREA) – LIVABLE COMMUNITIES ACT GRANT PROGRAM

Program Description

The Livable Communities Act (LCA), initiated by the Metropolitan Council (of the Minneapolis-St. Paul metropolitan area), is a grant program that provides "...funding for communities to invest in local economic revitalization, affordable housing initiatives, and development or

redevelopment that connects different land uses and has good access to transportation.” Stated goals of the program include job creation and economic development, affordability, mixed-income development, density, and establishing links among housing, jobs, and transit.⁷⁸ The LCA program includes three primary accounts: Tax Base Revitalization Account (TBRA), which provides grants to “clean up polluted land for redevelopment;” the Livable Communities Demonstration Account (LCDA), which provides “funding for development and redevelopment projects” with a focus on replicable models; and the Local Housing Incentive Account (LHIA), which provides affordable housing development and rehabilitation grants. In 2008, a sub-account of LCDA, Land Acquisition for Affordable New Development (LAAND), was established to provide funds for zero interest loans to LCA-eligible communities to take advantage of the real estate downturn.

The MC has three divisions: Community Development, Transportation (the MPO), and Environment. The LCA Grant Program is one of five programs under the Community Development Division. The other four programs are Research, Planning and Growth Management, Parks and Open Space, and Local Planning (which reviews the comprehensive plans as required by law). All of the LCA Grant Program’s funded projects must be consistent with the comprehensive plans and with the transportation plans overseen by the transportation division. While the divisions work independently, there is some integration of the comprehensive plans and the transportation plan. In addition, the staff review team for LCA grants includes a representative from the Transportation Division and a representative from Metro Transit.⁷⁹

The LCA Grant Program was cited in the livability literature⁸⁰ and was mentioned as a leading program by interviewees in other regions.

Reports Reviewed

The measurement focus of the LCA Grant Program is to assure that grantees deliver what they promise. Approximately 20 percent of staff time is spent on monitoring and reporting grantee results. The reports focus on these results.⁸¹ The primary performance report for the LCA Grant Program is *Metropolitan Livable Communities Fund: Report to the Minnesota State Legislature*.⁸² Metropolitan Council also develops a fact sheet on the program annually. The report, *Metropolitan Livable Communities Act – Expected Results for Grants Awarded 1996-2008*,⁸³ was reviewed for this research. An update is currently under development by the agency.⁸⁴ Unless otherwise noted, data in this section are from a synthesis of these two reports. Except where interviewees are directly cited, all analysis, conclusions, and opinions are the authors’ own, and do not necessarily reflect the position of the agency reviewed.

Analysis

Customer Focus

The primary LCA measure which appeals to customer needs is the number of new or improved housing units that are affordable. The wider range of livability criteria that the literature review indicates customers are interested in, such as walkability and access

to services, are only addressed through qualitative statements and project descriptions. In addition, LCA does not provide an overall measure of household cost, nor does it measure outputs such as transit and job accessibility that would contribute to a lower total household cost. LCA applied the Center for Transit-Oriented Development's Housing and Transportation Affordability Index (Affordability Index) to the Minneapolis-St. Paul area, and the results have been used as part of the rationale for LCA type plans and projects.

Alignment to Strategy, Goals, and Objectives

The goals for livability outcomes outlined in the enabling legislation are very broad and include affordability, job creation, reclamation of polluted land, mixed-income development, density, and the links between housing, jobs and transit.⁸⁵ The grant program itself focuses on funding developments consistent with the LCA legislative goals, land cleanup, and land banking – it does not fund policy or planning. Land-use planning and transportation planning are handled in separate programs and the LCA grantees' projects must be consistent with the adopted plans for their community.⁸⁶

The measures used are very well aligned to measuring program execution, focusing on measuring whether the grantees delivered what they promised rather than measuring whether the program resulted in policy outcomes definable as livable. In addition to a number of process metrics, the annual report to the legislature focuses primarily on private development outputs, including affordable housing units. Job creation and land reclamation are also addressed. Broader policy goals, such as density and links among housing, jobs and transit, are not directly addressed in the measures provided.

Clarity

The overall presentation of the LCA performance reports is clear, concise, and readable. The Metropolitan Council has chosen very concrete measures on which to focus, including outputs such as the number, type, location, and affordability of housing units developed or improved; and process metrics, such as the dollar amount by which the program is oversubscribed. LCA does not provide specific metrics on softer items such as quality of life, avoiding the problem of using measures that are, by nature, ambiguous.

Measurability – Efficiently and Accurately

The choice of clear, simple measures, such as private development activity and acres of land reclaimed, also means that LCA's primary measures are efficiently and accurately calculated. The decision to report on private funds leveraged and job creation raise well-known measurability challenges. Reporting on public and private investments is a concrete way to show the effects of livability programs. It must be noted that the figure provided for leveraged funds is simply the total funds provided by other entities for projects funded by LCA. The selection committee attempts to choose projects that would not go forward without LCA grant funding.⁸⁷ This is difficult to determine and the total leveraged funds must be taken for what it is – total matching funds – rather than a pure indication of funds that would not otherwise have been spent on livability projects. Similarly, while job creation

is reported, causation is difficult to prove. These measurability challenges are well-known and are faced by all programs that report on leveraged fund and job creation measures.

Balance

LCA provides a good balance of output and process measures and focuses on “a vital few” measures as recommended by the National Performance Review.⁸⁸ LCA also provides the broadest set of return on investment factors, including tax capacity increases. The use of a measure of “oversubscription” (more grant applications than funding can provide for) is also a potentially useful process indicator for the program.

Decision-Orientation

LCA's measures are produced annually and are timely for strategic decision making. The program also provides trended information over time, which provides context to decision makers for understanding the implications of the data. As stated above, the inclusion of a range of process measures is also useful for decisions regarding program optimization. The focus on process and development volume – with less emphasis on the type of developments and livability outcomes – means that decision makers have limited information with which to make strategic decisions about the program.

Metropolitan Council is also considering collecting information from grantees about what program elements are most and least useful, similar to the grantee survey undertaken by ARC.⁸⁹

Address Key Stakeholder Perspectives

The LCA program measures include indicators of stakeholder acceptance for both grantees and other types of stakeholders. The measure of “oversubscription” is a tangible expression of the response of grantees. “Acres of polluted land reclaimed” addresses stakeholders with an environmental focus. “Private development volumes” and “private investments leveraged” are useful metrics as indicators of developers’ responses to the program.

METRO (PORTLAND OREGON METROPOLITAN AREA) – TRANSIT-ORIENTED DEVELOPMENT AND CENTERS PROGRAM

Program Description

Portland Oregon’s Metro (Metro is the formal name of the COG/MPO) administers the Transit-Oriented Development and Centers Program (TOD/Centers Program). This program was established to pursue Metro’s growth management plan by providing public investments to developers to build in concert with the plan’s goals in designated urban centers, regional centers, and corridors. The plan’s stated purpose is to foster urban in-growth that is accessible to transit:

Metro’s growth management plan, the 2040 Growth Concept calls for the region to grow up rather than out, away from farm and forest land by limiting expansion and

focusing growth around the region's 44-mile MAX Light Rail Transit (LRT) line, along frequent bus corridors and in mixed-use urban centers. The TOD/Centers Program pursues the Growth Concept by providing public investments to developers to build more intensely and with higher attention to creating a walkable environment than the market would complete on its own. A TOD or Centers development is intended to result in a higher share of travel from transit, walking and biking and a lower percent by an automobile.⁹⁰

The primary focus of the program is to “shape the community for increased transit, walking or biking.”⁹¹ Project selection is based primarily on cost per induced transit rider.⁹² This focus is driven by the fact that the program is funded by transportation dollars.⁹³ The program also addresses a broader range of livability goals including air quality, reduced auto congestion, economic development, housing and transportation options, location efficiency, and providing an attractive return to developers as a means to leverage private funds.⁹⁴

Metro is both the COG and MPO. Land-use planning and transportation planning are closely connected through Metro's programs. The TOD/Centers Program is an implementation program exclusively focused on funding infrastructure. It is managed separately from planning. The TOD/Centers Program also has a shorter focus than the planning departments. Many of the urban centers, regional centers, and corridors designated by the planning departments reflect hopeful planning and are not actually ready for investments of the types that the TOD/Centers Program funds.⁹⁵

The TOD/Centers Program is cited in the livability literature⁹⁶ and was mentioned by interviewees in other regions as a leading program. The program was also featured in the British Broadcasting Corporation's series, “The World's Best Public Services,” in 2006.⁹⁷

Reports Reviewed

Metro set out to establish detailed annual reporting but shifted to periodic program analysis. In 2003 and 2004, Metro also produced detailed reports on the 2040 Growth Plan, with specific output and outcome metrics for each of the objectives of the Growth Plan, including those affected by the TOD/Centers Program.^{98,99} In 2007, Metro produced *Transit Oriented Development and Centers Program: Annual Report 2007*.¹⁰⁰

Two later reports developed by the planning departments provided Metro with specific insights valuable to the TOD/Centers Program: *Urban Living Infrastructure* (published in 2007) measured the effects of “urban amenities” such as dry cleaners, restaurants, and bookstores on housing value.¹⁰¹ *State of the Centers: Investing in Our Communities* (published in 2009) built on this analysis to provide a detailed picture of the state of the urban amenities, urban form, and demographics in each of the designated urban centers, regional centers, and corridors.¹⁰² Both of these reports were used by the TOD/Centers Program to focus program investments.¹⁰³ However, neither is actually a performance measurement report; they are both essentially planning studies.

Finally, Metro produces the *Metro Management Report*,¹⁰⁴ a quarterly report of activities and issues against each Metro budget category that includes the TOD/Centers Program. This report is not used by the program staff for program decision making.

Unless otherwise noted, the data in this section are from a synthesis of all of the reports reviewed. Except where interviewees are directly cited, all analysis, conclusions, and opinions are the authors' own, and do not necessarily reflect the position of the agency reviewed.

Analysis

Customer Focus

Metro has measured a number of elements reflecting customer definitions of livability. Metro reported on economic growth, changes in transportation access and mode share, and the extent and nature of development including changes in density, mixed-use, affordability, and park acres per capita. The use of stakeholder surveys, in combination with analyses of program data, supports the customer-orientation of the reporting. Most of these measures were reported in *The Portland Region: How Are We Doing?* It is a report on the achievement of the region's planning goals rather than a program-specific performance report. The advantage of this approach is that Metro decision makers were encouraged to view the goals as a package rather than as individual components. The disadvantage of the report is that it did not always tie the outcomes and outputs back to the TOD/Centers Program and other programs that contribute to the goals. Therefore, decision makers had to infer the connections themselves when attempting to understand the true impact of a particular program. In contrast, *Transit-Oriented Development and Center Program: Annual Report 2007* is specific to the program but focuses primarily on process and outputs as opposed to the outcomes customers might seek. The *How Are We Doing?* report did include figures on affordability, one of the many factors customers consider important.

The clearest example of a customer-oriented measurement that impacted program direction is the *Urban Living Infrastructure* (ULI) analysis. According to the Executive Summary, the ULI measured the effect of "urban amenities" such as dry cleaners, restaurants, and bookstores on housing value, providing insight to Metro on what is valuable to customers.¹⁰⁵ Although this was not used directly as a program performance measure, it was used to improve the program. Based on the results of the report, the TOD/Centers Program began funding projects that advance amenities that are valued by residents. For example, the program now can fund the renovation of a building to enable its use as a restaurant to support an increase in "urban amenities" in a designated center.¹⁰⁶

Alignment to Strategy, Goals, and Objectives

The primary goal of the TOD/Centers Program is to "shape the community for increased transit, walking or biking" in concert with the "Metro 2040 Growth Concept" (the overall planning framework for the region). Additional goals include transportation cost-effectiveness, air quality, reduced congestion, economic development, housing and transportation choices, and accessibility of jobs, services and trade centers.¹⁰⁷

The primary program report, *Transit-Oriented Development and Centers Program: Annual Report 2007*, focuses on output measures such as private development activity and process measures such as project funding by jurisdiction. The only measures directly related to transit are cost effectiveness measures; cost per induced transit rider and the net present value of future farebox revenues. Some of the secondary goals are measured through the reporting of development of housing units by affordability category and commercial development by type. *State of the Centers: Investing in Our Communities* provides qualitative information on both road and transit access in each designated center and corridor and provides detailed information on access to services. It is not designed to measure the program's effect on these items. Neither report addresses pedestrian or walking features.

The Portland Region: How Are We Doing? provides measures for the achievement of the 2040 Growth Concept. This publication ties performance measures directly to each development goal. Metro ensured that every development goal had one or more associated measure.

Clarity

All of the performance measures used by Metro are thoroughly explained and relatively unambiguous. However, the sheer number of measures initially reported by Metro meant that the reporting program was not simple as recommended by the National Performance Review. Metro mitigated this complexity by providing a range of reports, each suitable to a different audience. This set of reports ranged from a detailed evaluation of multiple measures against every goal in the 2040 Growth Plan to a simple fact sheet summarizing the impact of the TOD/Centers Program. Simplicity was later gained by paring down the number of reports, albeit at the cost of losing detail.

Measurability – Efficiently and Accurately

In 2007, Metro chose to report on a broad range of measures for the TOD/Centers Program, as it did for the overall 2040 Growth Plan in 2003 and 2004. As with the reporting on the overall 2040 Growth Plan, the planned annual report for the TOD/Centers Program was found to be too resource-intensive to produce annually.¹⁰⁸ Some of the measures in these two reports were very easy to record accurately and credibly, while others required complex modeling or subjective opinions provided through stakeholder surveys. This complexity, combined with the sheer number of measures reported, meant that efficiency was compromised.

Balance

Metro has used a host of measures, including those that address process, output and outcome, quantitative and qualitative, as well as a full spectrum of objectives. However, as discussed above, Metro found balancing efficiency and comprehensiveness a challenge.

Decision-Orientation

The robustness and span of the measures reported in the *Transit-Oriented Development and Centers Program: Annual Report 2007* and *The Portland Region: How Are We Doing?* provide data to support most decisions. In addition, the reports include analyses of the details behind the numbers and provide information about trends over time, both of which can help in decision making. However, the fact that the outcomes and outputs measured in *The Portland Region: How Are We Doing?* report were not directly tied to the programs such as the TOD/Centers Program suggests that they were less useful in making decisions regarding the strategic direction and program focus of each of the programs in Metro's portfolio.

In addition, since the detailed reports were not made annual, the information available each year or every few years is limited.

The TOD/Centers Program must depend on State of the Center reports (mentioned earlier) that use baseline measures developed by the planning department rather than having a set of measures focused more intentionally for program performance.¹⁰⁹ Depending on analyses coming from the planning department is particularly concerning, as the planning department is focused on 2040 with many centers still described by program staff as "aspirational," while the TOD/Centers Program is focused on funding projects that will have a short-term impact on the community and on leveraging developer funding. Therefore, even if the State of the Centers report is updated from year to year, the overall state of the centers will likely not reflect significant changes from year to year as a result of the TOD/Centers Program. A more targeted evaluation, looking at the areas receiving funding, would be more useful as an evaluation tool to support strategic direction.

The quarterly management report, which provides information on recent actions and upcoming decisions for each funded area within Metro, is timely but remains unused by the program staff and is limited in scope to action item progress.¹¹⁰ It appears limited in use to tactical course correction from senior management.

The ULI report was used to change program direction, allowing for the addition of the funding of improvements to urban amenities.¹¹¹ Metro plans to produce other program analyses in the future, as needed, to support other major strategic decisions.¹¹² However, without a regular, broader program evaluation or reporting approach, it is not clear whether Metro will have the information it needs to provide course corrections on a timely basis.

Address Key Stakeholder Perspectives

The range of measures in Metro's past reports ensured that all key stakeholder concerns, including residents, developers, environmentalists, and advocates of affordability, transit, and farm preservation were included. Key annual reports have been discontinued and Metro will need to ensure that future analyses and reports continue to address all stakeholders.

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS TRANSPORTATION DEPARTMENT – SUSTAINABLE DEVELOPMENT INITIATIVE

Program Description

The North Central Texas Council of Governments Transportation Department (NCTCOG) operates the Sustainable Development Initiative (SDI). The overall purpose of SDI is to promote development types that will reduce the overall demand for transportation infrastructure and improve air quality. Specifically, the program has funded infrastructure (transportation infrastructure and station area development), land banking, planning, and outreach projects that enhanced one or more of the following goals: utilization of existing system capacity, mixed-use, rail mobility, and access management (“shared drives/parking, spacing of turns/signals”).¹¹³ NCTCOG is the MPO as well as the COG and the program is run by the transportation department.¹¹⁴ The program was cited in two reports by Reconnecting America.¹¹⁵

Reports Reviewed

NCTCOG does not produce a regular performance report on SDI, nor has it executed formal program evaluations. Program performance measures were included in the program’s recent Call for Projects and in a recent presentation at the 10th Annual North Texas Public Works Roundup.¹¹⁶ These publications include an overview of sources and uses of funds, as well as case studies of funded projects. They provide narrative descriptions of project impacts and selected project statistics. In addition, NCTCOG maintains a development database and SDI uses the database to produce reports to help the program leadership decide on the focus of the Calls for Projects.¹¹⁷

Analysis

Customer Focus

NCTCOG reports on customer-focused measures of success through the descriptions of funded projects. The quantitative measures published by NCTCOG do not address the type of developments funded in terms of measures such as increased access to jobs and amenities, mixed-use, mixed income, affordability, or increased transportation options. Page-long descriptions of each project provide a detailed picture of each project, allowing readers to make their own judgments about the degree to which the project fulfills customer needs. Each project description includes customer-oriented items such as use-mix and transit access features. The advantage of this approach is that a more tangible expression of livability is described and presented in pictures, whereas programs that rely solely on statistics for customer-oriented measures may obscure the quality of life aspect of these factors. The disadvantage is that the descriptions allow the program to choose which elements to focus on in each development and do not provide a bigger picture of the success or failure of the program to meet the full range of goals.

The inclusion of information about increases in property value in some of the project case descriptions raises an interesting question about customer focus. For current property

owners, development projects that raise the value of property is a benefit. For some prospective property owners or renters – those who seek upscale urban settings as described by the real estate industry reports discussed above – higher property values may also be seen as a positive as long as transit access and other amenities either reduce total household costs or raise the value, monetary or other, that they gain from their investment.¹¹⁸ For customers seeking affordability, increased property value is a negative. NCTCOG has a stated goal of housing-income matching and does not report on whether the reported land value increases are consistent with this goal.

Alignment to Strategy, Goals, and Objectives

SDI seeks to promote a mix of objectives including infill, which is mixed-use development with proximity to transit. While these factors are described in the project case studies, the summary metrics focus entirely on uses of funds by program areas such as planning, land banking, and transportation infrastructure. The reader is left to infer from the cases the success of the program in meeting its goals.

SDI has two primary strategies: funding planning and land banking as a stepping stone to livable development, and funding development to leverage private funds. The program reports do not provide clear evidence as to whether the funded plans and land banking resulted in livable development. While some of the individual cases note the amount of private development funding that was leveraged, no total is provided across the project. Therefore, the success of this strategy is not directly measured in the published reports.

Clarity

The summary statistics presented are clear and unambiguously defined; the reliance on the project case studies to provide the fuller picture of program success is a double-edged sword. While it provides a better description of the results than summary statistics might, it leaves to the reader the task of sorting out the overall impact. Thus, the overall success of the program is somewhat less than clearly stated.

Measurability – Efficiently and Accurately

The summary statistics are efficiently and accurately measureable. However, because the cases provide different information for each project, the method used by the agency to select which information to provide in each case is unclear. Hence, the accuracy of the reports may come into question.

Balance

SDI provides a balance of quantitative and qualitative measures. While SDI's reporting focuses on only a few measures, it is not clear that the measures reported are the "vital few," in the words of the National Performance Review. The few summary statistics provided are focused on uses of funding, not on the results of that funding. This may be because the published measures are part of a Call for Projects and are focused on an audience of

potential grantees. Even with an audience of potential grantees, providing more measures on the impact that the grants will have on the grantees' communities would be useful.

Decision-Orientation

The published reports are not targeted toward program decision makers. Instead, they are part of a Call for Projects. The primary decision to be made by this audience is whether to apply for a project and what type of project to apply for. Therefore, the information provided (descriptions of the results, the nature of individual projects, and summary statistics on the uses of funds) is helpful.

For internal decisions, NCTCOG develops ad hoc analyses based on the information in its development database. These analyses help NCTCOG identify the focus for the Call for Projects in each funding cycle. For example, low occupancy rates in an area may lead to a focus on that specific area. A decrease in overall affordability may lead to a focus on affordable developments.¹¹⁹ While these analyses show development trends, they are not intended to directly measure the impact of the previous round of projects. Rather, they are intended to determine the need for future projects.

Address Key Stakeholder Perspectives

The reports reviewed focus on two sets of stakeholders: potential grantees for the Call for Projects and peer agencies for the presentation to the North Texas Public Works Roundup. The reports are targeted towards potential grantees. For peer agencies – or for other stakeholders not targeted by these reports – a broader set of measures would be in order.

METROPOLITAN TRANSPORTATION COMMISSION (SAN FRANCISCO BAY AREA) – TRANSPORTATION FOR LIVABLE COMMUNITIES PROGRAM

Program Description

Transportation for Livable Communities (TLC) administered by the San Francisco Bay Area Metropolitan Transportation Commission (MTC) focuses on supporting transportation planning and capital projects that contribute to transit-connected communities. According to the program website:¹²⁰

[T]he purpose of the Transportation for Livable Communities (TLC) Program is to support community-based transportation projects that bring new vibrancy to downtown areas, commercial cores, neighborhoods, and transit corridors, enhancing their amenities and ambiance and making them places where people want to live, work and visit. TLC provides funding for projects that provide for a range of transportation choices, support connectivity between transportation investments and land uses, and are developed through an inclusive community planning effort.

Program goals include transportation choice, mixed-use, density near transit, revitalization/infill, and quality of life/sense of place. In addition, joint planning is stated as a goal in itself in addition to being a means to achieve the other goals.¹²¹

MTC is the MPO for the region. Unlike the other agencies reviewed, MTC is only an MPO; it does not have other COG roles or authorities. MTC collaborates with other agencies to make transportation-land-use connections.¹²²

TLC was cited in the livability literature¹²³ and was mentioned by interviewees in other regions as a leading livability program.

Reports Reviewed

MTC takes a program evaluation approach to measuring performance. In 2008, MTC published *Ten Years of TLC: An Evaluation of MTC's Transportation for Livable Communities Program* (Ten Years of TLC), along with a series of presentations drawn from the published report.¹²⁴ This evaluation built upon a similar program evaluation executed in 2004. MTC also commissioned *Financing Transit-Oriented Development in the San Francisco Bay Area: Policy Options and Strategies* in 2008 to help with strategic program decisions regarding project financing.¹²⁵ This report provides recommendations on future performance measures for the program. Unless otherwise noted, all data in this section are from a synthesis of these two reports. Except where interviewees are directly cited, all analysis, conclusions, and opinions are the authors' own, and do not necessarily reflect the position of the agency reviewed.

Analysis

Customer Focus

Performance measures used in the published reports on TLC directly addressed key customer needs such as density, transportation options, affordability, and quality of life. Some of the customer needs identified in the literature review were not addressed. For example, access to a full range of retail and other amenities and services was not reported, nor was safety.

MTC's primary measure of affordability was the percentage of developed units that were affordable based on median income and median house price. Although MTC, like Metropolitan Council, applied the Housing and Transportation Affordability Index to provide a picture of the combined housing and transportation costs in the TLC communities, this analysis was done in a standalone report and was not directly tied to TLC; no trend over time or other indication of the impact of TLC on affordability was provided. The index was used to show the need for TLC types of programs rather than their results.¹²⁶

Although customer needs are reflected in the reporting, the reports were based on a survey of grantees. The perceptions of softer outcomes such as quality of life are from the perspective of the jurisdiction, not of the citizens themselves.

Alignment to Strategy, Goals, and Objectives

TLC's program evaluations directly tied each measure to the goals outlined for the program, and provided at least one measure for each identified goal, program area, and

strategy type, such as planning funding, infrastructure funding, and creating rewards for development of affordable housing.

Clarity

MTC's program evaluation is presented as a narrative, presenting the overall findings, insights, and recommendations for each program and goal area and providing individual statistics on outputs or survey results within this context. The reports do not provide full statistics on all of the measures and survey questions used. The results are not entirely unambiguous, as the reader sees only the interpretation of the data by the analysts, without the information needed to enable the reader to critically evaluate that interpretation.

Measurability – Efficiently and Accurately

The TLC program reports take up the topics of both measurability and balance. In *Ten Years of TLC*, potential measures for each goal are outlined and the authors discuss the practicalities of applying these measures, addressing access to data, costs of data collection, and other factors. The authors then state which measures are used and why. In *Financing Transit-Oriented Development in the San Francisco Bay Area*, a strategy study for the TLC and TOD programs at MTC, the authors propose a set of potential TLC performance measures and provide specific sources of data that support efficiency and accuracy in collection. TLC has incorporated many of these measures into its project screening and scoring criteria and some into its program evaluation approach.¹²⁷

TLC sees many of the quantitative measures of livability as proxies for quality of life and cautions that, while quantification is important, overreliance on quantitative measures can obscure the real results of livability programs. MTC's Doug Johnson noted that "when you talk to people in downtown Gilroy, they are ecstatic about the fact that they have a nice place to have an outdoor movie night and a farmers' market. How do you enumerate that?"¹²⁸ MTC addresses this question by pairing up quantitative analysis with grantee surveys asking which of the program goals were effectively met through the funded project. Johnson notes that the goals most impacted were sense of place and quality of life.¹²⁹

Balance

The grantee survey used for *Ten Years of TLC* covered a broad range of goals. The full evaluation covers process, output, and outcome. The evaluation did not select the "vital few" measures up front, but it did sort through the results and present only the data that appeared meaningful to the evaluators.

MTC seeks to balance its approach to measuring livability across three categories: screening measures, scoring measures, and evaluation measures. It acknowledges that the three types of measures have some overlap. Concrete measures, such as access to transit and projected induced ridership, serve as factors to screen potential projects and rank projects for funding prioritization. If projects are implemented as designed, outcomes and outputs in these areas are expected to be achieved. Project evaluators can then focus on answering periodic questions about strategy. Evaluations include a mix of output and

outcome measures such as development activity and affordability, as well as effectiveness and efficiency questions like grantee perceptions of which aspects of the program were most useful in achieving livability goals.¹³⁰ Assessment of screening and scoring measures is outside of the scope of this research.

Decision-Orientation

MTC takes a program evaluation approach to performance reporting. Rather than establishing sets of metrics to be reported annually, MTC engages a consultant every few years to provide an overall evaluation of the program encompassing process, output, and outcomes. These evaluations provide data, descriptions of projects, analysis, and recommendations. As such, the performance reports are very focused on strategic decision making and provide guidance as to what MTC will require in order to make strategic program decisions. In particular, the grantee survey used for *Ten Years of TLC* asked not only about outcomes, but also about the process and the strategy with questions about which aspects of the program were most useful in achieving program goals. The evaluation looked at the impacts of the planning program on the infrastructure program, asking grantees to identify whether projects identified based on planning grants were implemented and whether they were implemented with TLC infrastructure grants.

MTC has used the results of performance evaluation to redirect program focuses. For example, metrics on project implementation rates led to the cancellation of the Housing Incentives Program and the TLC Planning Program. MTC folded the objectives of these niche programs into the larger TLC program, allowing planning and housing needs to be funded under the larger program and simplifying the program.¹³¹

The downside of MTC's periodic evaluation approach, according to the findings of the literature review, is that the information is not timely enough for annual program redirection and MTC does not have a consistent set of data to prove trends over time.

MTC believes that consistent, trended data is not necessarily the most useful information to support strategic decisions. While measures such as leveraged funding, ridership, and access to bicycle and pedestrian options are consistently useful, the needs of a program may change from year to year and the program evaluation questions may change as well. Therefore, some flexibility to change some aspects of performance evaluation to match the decision needs at each evaluation period is desirable.¹³²

Address Key Stakeholder Perspectives

MTC is the only MPO reviewed that is not also the COG for the region. The primary objectives and project selection criteria are focused on access to transit, bicycle, and pedestrian options. In spite of this transportation perspective the goals and performance measures applied are broad and include affordability, emissions, and other measures important to non-transportation stakeholders.

MTC also makes an effort to focus on goals and measures that resonate with non-planners, such as ordinary citizens, politicians, and business people. While reduced VMT

might appeal to a transportation planner, a survey result that shows that quality of life has improved in an area says more to many of the program's stakeholders.¹³³

V. CONCLUSIONS AND RECOMMENDATIONS

Every livability program has a unique set of goals, objectives, strategies, customers, and stakeholders. Therefore, no single set of performance measures should be applied to every livability program. New programs can learn a great deal from the performance measurement approaches applied by the five mature programs analyzed for this research. Each of the five programs demonstrates good practices and potential pitfalls and provides examples of measures that new programs can consider adopting. Looking across the five programs also provides a broader set of lessons that new livability programs can apply as they develop their own performance measurement approaches.

SUMMARY OF ANALYSIS RESULTS

Most of the programs analyzed for this study report on sources and uses of funds, the volume of development activity produced by the program, and financial return factors. Beyond these commonalities, the measures reported are very diverse and reflect the diverse goals and needs of the programs. A summary of what can be learned from each of the five livability programs analyzed for this research is provided in Table 7.

The Atlanta Regional Commission (ARC) provides a good example of how to achieve breadth and balance in an efficient, affordable manner. Metropolitan Council (in Minneapolis-St. Paul), on the other hand, demonstrates focus on a smaller set of very clear, quantifiable measures of project delivery that are tailored to address key stakeholders. Oregon Metro's reports provide an extremely useful group of measures from which agencies can select. North Central Texas Council of Governments' (NCTCOG) case study-style reporting shows how to document the vibrancy and effectiveness of livability programs. The Metropolitan Transportation Commission's program evaluation approach is an example of strong, goal-oriented decision support as well as span of measures, balance, and customer focus.

Table 7. Program Analysis Summary

Agency/ Program/ Agency Type	Customer Focused	Aligned to Strategy, Goals, Objectives	Clear, Unambiguous	Measurable: Efficiently, Accurately	Balanced	Decision- Oriented	Addresses Key Stakeholder Perspectives
Atlanta Regional Commission Livable Centers Initiative	Measures relatively broad set of amenities, features; but not affordability.	Measures all goals and asks grantees what program features best support goals.	Clear, direct, thoroughly explained. Also measures more ambiguous quality of life outcomes through grantee survey.	Efficient collection of wide range of measures. However, outcomes measured indirectly through grantee surveys.	Outcomes, outputs, and process trended over time.	Biennial to support strategic program direction. Measures have been used to refocus the program.	Focuses on grantee and policymaker perspectives. Developer perspectives addressed indirectly.
Metropolitan Council Livable Communities Act Grant Program	Focus on housing affordability. Other customer needs addressed qualitatively.	Focus is on delivery of projects, as well as policy changes, jobs created, and land reclaimed. Density and links among housing, jobs and transit not measured.	Clear, direct, and thoroughly explained for most measures.	Focused on highly measurable project delivery elements.	Primary focus is on project delivery.	Annual and trended. Focus on project delivery limits the range of decisions supported.	Developers, environmental, affordability advocates, policy makers, and grantee perspectives addressed.
Metro TOD/Centers Program	A wide range of customer needs addressed over time. Scaled back more recently.	Primary goal (transit/bike/ped) partially measured with plans to expand measurement of bike/ped access.	Unambiguous and thoroughly explained. However, was originally overly detailed, not focused on “the vital few.”	Started with a complex and costly approach and scaled back.	Started out covering the full spectrum and scaled back to minimal measurement.	Started out with a set of analyses covering why the program is important but scaled back to minimal measurement.	All perspectives have been covered in reports over time, with different reports targeted to each audience. Scaled back recently.
North Central Texas Council of Governments Sustainable Development Initiative	Case study approach brings the end customer perspective on livability to life. Clear focus on grantees as intermediate customers. However, does not address all end customer needs.	Case studies address all goals. However, data are not comprehensive enough to determine if the program meets goals overall.	Information presented is clear. However, each case provides different data, leading to ambiguity in program-wide results.	Summary statistics are focused and measurable. However, each case provides different detailed data.	Both quantitative and qualitative. Primarily focused on process and to some degree output, with little on outcomes.	Very focused on decision making of the target audience. grantees. Limited decision support for the program itself.	Focused on grantees.

Table 7, continued

Agency/ Program/ Agency Type	Customer Focused	Aligned to Strategy, Goals, Objectives	Clear, Unambiguous	Measurable: Efficiently, Accurately	Balanced	Decision- Oriented	Addresses Key Stakeholder Perspectives
Metropolitan Transportation Commission Transportation for Livable Communities	Addresses affordability, density, transportation options and "quality of life." Does not address all amenities.	Evaluation is directly tied to program goals, and at least one measure is defined for each goal and each program/ strategy area.	Narrative style provides the reasons for the results and key statistics are selected to illustrate points. The full data and survey questions are not provided.	Explicitly addressed efficiency and accuracy and made conscious tradeoffs. Focused the evaluation on strategic questions rather than regular reporting for its own sake.	Qualitative and quantitative. Covers process, output, and some outcomes. Attempts to distinguish between project screening/ selection measures and project evaluation measures.	Focused on major strategic decisions, and provides the what, the why, and recommendations. Not timely enough to support more operational decisions.	Even though MTC is an MPO and not a COG, addresses non-transportation stakeholders. Explicitly seeks to use measures that speak to "non-planners."

Note: Particularly strong or notable approaches highlighted in grey boxes.

LESSONS LEARNED ACROSS THE PROGRAMS

Looking across all five programs reveals a broader set of lessons that new livability programs can apply when developing a performance management approach. This section discusses each of these lessons in turn.

The structure of an agency does not dictate the focus of its performance measurement:

- Measure the nature, not just the volume, of development
- Meaningful measurement need not be costly
- A focus on decisions pays off
- Report on both affordability and land value appreciation
- Tailor the reporting to the intended audiences
- Balance the quantifiable with subjective factors, such as quality of life

Agency structure does not dictate measurement focus: ARC (Atlanta) is a small agency with responsibility for both transportation and land use planning. ARC's LCI leadership found that this integrated structure helped them take an integrated approach to measuring livability. MTC's (San Francisco) experience demonstrates that MPOs without land-use responsibilities can still take an integrated approach to measuring livability. Although MTC is the only MPO studied that is not also a COG, it managed to take one of the broadest views of livability in its performance evaluation and directly measured the achievement of both transportation- and non-transportation-related livability factors. This is because MTC established broad livability goals for the program, and then explicitly chose a set of measures that addressed every program goal. Livability programs struggling with measuring goals that fall outside their own agency's authorities can look to MTC as an example of how to overcome the constraints of agency structure.

Measure the nature, not just the volume, of development: While some of the agencies reviewed for this study characterized development based on their livability goals – reporting on factors such as affordability, walkability, and use-mix – most programs did not capture all of their livability goals or all of the customer criteria for livability in their development activity statistics. Often, livability goals were assumed to be achieved because the projects were selected based on their ability to achieve them. However, project selection is imperfect. Even with the most sophisticated project selection process, changes in conditions can easily change the ability of a portfolio of projects to accomplish the results a selection committee expects. For example, ARC carefully selected projects that would achieve a wide range of objectives for development in designated LCI areas including density, mixed-use, and transit accessibility. When ARC measured use-mix in the LCI areas, however, it found that the projects were not achieving the desired mix. As a result, ARC modified its LCI project selection focus. Measuring both the volume and the nature of completed

development was critical in assisting ARC in determining whether the program produced the desired results and how to adapt the program to deliver better results.

The programs analyzed for this study provide several examples of how to measure the nature of the development. MTC measured not only the volume of development, but also the nature of that development in terms of affordability, proximity to transit, and other program objectives. Metro (Portland) measured results such as affordability, use-mix, and cost per induced transit rider. In addition to measuring these and other factors, ARC asked grantees what percentage of development was “in line with LCI goals.” All livability programs should report on both the volume and the nature of the development delivered by the program to help determine whether the program delivered the intended results.

Meaningful measurement need not be costly: Resource constraints led some agencies to limit the scope of measurement and the degree of empirical measurement of factors such as walkability, proximity to amenities, and mode switch. Several programs identified ways to provide meaningful reporting without breaking the bank. For example, ARC provided a robust biennial report without adding significant cost to the program. Two strategies it applied were to make the report an internship project and to reuse data that was collected for other purposes. The measurement scope was balanced and broad, but not as extensive as the comprehensive measurement program that Metro initially applied but decided not to sustain on an annual basis. MTC addressed the cost of measurement by undertaking periodic, decision-focused program evaluations every few years instead of maintaining a comprehensive annual or biennial reporting scheme. Although this approach means that MTC does not have statistics to spot trends regularly, the decision-focus of MTC’s approach has proven its value by delivering insights that led to significant changes in the program direction. Agencies should not assume that good performance measurement is too costly to achieve. They should instead apply ARC and MTC’s strategies as cost effective ways to get valuable program insights.

Focus on decisions pays off: Agencies with decision-focused measures find that the measurement does improve decisions, making the return on program investment higher. Rather than, in the words of one interviewee, “running around justifying what we already know,”¹³⁴ programs that designed their performance measurement programs to answer specific questions got those questions answered. ARC focused its measures on the objectives of the program and used the performance reports in setting program direction. They discovered that office development was becoming concentrated in LCI areas, but housing development was not. They increased focus on housing and added a “halo effect” measure, in an effort to determine whether housing development was truly remaining sprawled or whether housing development was, in fact, being concentrated just outside the LCI areas. ARC also asked grantees what worked and what did not. It used this information in adapting the program. MTC’s approach, tailoring the analysis to the decision needs at the time of the analysis, provided insight into progress on every goal and into what aspects of the program were most effective in helping grantees achieve the program goals. As a result, MTC was able to use the evaluation to refocus the program, eliminating two program areas. Agencies whose measurement programs were more focused on compliance or program advertising saw less of an impact on decisions. Agencies developing new livability program performance measures should start with the

question of what decisions the measurement will support and design the program to give them the data and analysis they need support those decisions.

One agency was reluctant to survey grantees and ask what program improvements could be made. It feared that grantees would ask for program changes that policy makers would not support. This concern raises the question of who is the customer: grantees, policy makers, or residents themselves? A grantee survey can be developed that helps policy makers use customer and stakeholder perspectives to prioritize program focus without compromising the strategic intent of the program or raising stakeholder expectations unnecessarily.

Report on both affordability and land value appreciation: Metropolitan Council, Metro, and NCTCOG cited increases in property value as evidence of success. Higher property values indicate that customers value the neighborhood and its amenities and are also an indicator that developers are getting the return they need to invest in the developments sought by the agency. Metropolitan Council also reported on increased tax capacity resulting from the land value increase.

The creation, or preservation, of affordable housing is also seen as a core aspect of livability for most of the agencies. As such, rising property values may run counter to program objectives. This tension is well-recognized and must be addressed by each program as a matter of policy. If agencies have both affordability and value-appreciation goals, they must include measures for both of these objectives in their reporting to prevent measurement imbalance from leading to program focus imbalance.

Tailor the reporting to the intended audiences: All of the agencies studied focused their performance reports on the audiences they sought to reach. NCTCOG sought to gain new grant applicants and painted a picture of the projects to make the program come to life. Metro produced multiple reports, from a very detailed analysis to support tactical decisions to a high level summary to gain stakeholder acceptance. MTC's leadership sought to understand why the program results were as they were and took a program evaluation approach. It developed reports that were filled with explanation rather than being a series of statistics. MTC also explicitly sought to combine traditional measures (loved by planners) with measures that resonate with non-planners (the residents, businesspeople, and politicians that make up their stakeholders). Good performance measurement requires understanding all of the audiences of the reports and incorporating their perspectives and needs into the reporting approach.

Balance the quantifiable with subjective factors, such as quality of life: ARC, MTC, and Metro all sought to measure the more subjective elements of livability such as sense of place and quality of life. They established both qualitative measures from grantee surveys, and quantitative indicators such as number of acres of parkland. Other agencies preferred to focus on clearly measureable factors, attempting to avoid implying causation where correlation was all that was proven. They covered the “softer” aspects through narrative case studies. There is no single answer to striking this balance, as measuring only the concrete can lead to focusing only on the concrete, but using softer measures can provide misleading results. Every agency will need to determine a balance that works for

its programmatic setting. Finding some way to capture the full picture is critical. Even if a goal is difficult to measure, reporting on it ensures that the program will continue to focus on it.

CLOSING COMMENTS

In conclusion, the livability community has a strong degree of consensus that policy, planning, and funding are needed to close the gap between the livable neighborhoods that residents and policy makers both increasingly seek and the costs, risks, and regulatory burdens that keep developers from delivering them. These livable neighborhoods are more than the sum of their parts – a densely populated neighborhood that is not accessible to jobs or a mixed-use neighborhood that is not safe would not be called livable by any actual residents. Livability is intended to be inherently integrated – what differentiates a good measurement program from a great one is whether it captures the whole, or simply captures – and thus incentivizes – some subset of disjointed parts. If measures are truly efficacious, then we must measure all of what we seek. Similarly, great measurement goes beyond justifying the program to truly seeking to understand what works and why. If we only seek to justify what have already done, we will never learn what we lack. Future livability programs would do well to learn from both the individual measures applied by these mature programs studied and the bigger picture of what an integrated, balanced, decision-oriented measurement program can provide.

VI. APPENDIX A: LIVABILITY PROGRAM SUMMARIES

This appendix provides brief summaries and key facts about the livability programs analyzed in this report, including the key performance measures that were the focus of inquiry.

ATLANTA REGIONAL COMMISSION, ATLANTA, GEORGIA

Program Summary

<p>Location: Atlanta metropolitan area</p> <p>Lead Agency: Atlanta Regional Commission (ARC)</p> <p>Lead Agency Type: ARC is both the MPO and the regional association of governments. Grantees are local jurisdictions and non-profit organizations.¹³⁵</p> <p>Program Name: Livable Centers Initiative (LCI)</p> <p>Purpose: Plan and implement joint land-use/transportation strategies to create livable communities.</p> <ul style="list-style-type: none"> • "Help planners and governments more effectively link current and future land use planning to existing or planned transportation infrastructure."¹³⁶ • "Encourages local jurisdictions to plan and implement strategies that link transportation improvements with land-use development to create sustainable, livable communities."¹³⁷ 	
<p>Goals and Objectives</p>	
<p>Goal Types¹³⁸</p> <ul style="list-style-type: none"> • Mixed income • Mixed use • Walkability focus (w/transportation options) • Safety • Sense of place • Quality of life • Reflect the goals of the community 	<p>Stated Goals and Objectives¹³⁹</p> <ul style="list-style-type: none"> • "To connect homes, shops and offices by encouraging a diversity of mixed-income residential neighborhoods, employment and recreational choices at the center/corridor level • To provide access to a range of travel modes including transit, roadways, walking and biking, while emphasizing the pedestrian • To improve safety and a sense of place in order to increase livability and quality of life for all members of the community • To develop an outreach process that promotes the involvement of all community stakeholders so that the LCI plans created reflect the goals and vision of the community"
<p>Strategies and Programs</p>	
<p>Strategies¹⁴⁰</p> <ul style="list-style-type: none"> • Joint planning • Zoning and other policy changes • Funding (planning/transportation projects) 	<p>Programs¹⁴¹</p> <ul style="list-style-type: none"> • LCI Planning Grants to local jurisdictions and non-profits (\$1M annually) – plans must address zoning and other local policy barriers • Priority funding for transportation projects within the LCI study areas if the policies outlined in the LCI plans are implemented (\$500M planned, \$129M programmed since 1999)

Awards/Evidence of Good Practice¹⁴²

- APA National Planning Excellence Award for Implementation, 2008
- EPA National Award for Smart Growth Achievement – Policies and Regulations, 2008
- National Association of Regional Councils – Certificate of Excellence for Best Practices Project, 2005
- Federal Highway Administration & Federal Transit Administration – Transportation Planning Excellence Award for Transportation and Land Use Integration, 2004
- Association of Metropolitan Planning Organizations – Noteworthy MPO Practices in Transportation-Land Use Planning Integration, 2004
- Georgia Planning Association – Outstanding Innovative & Effective Planning Process, 2000
- Articles in Georgia Trend (Sept 2006 & July 2004), New Urban News (March 2002), Brownfield News (Apr 2005), numerous articles in Atlanta Business Chronicle, AJC and other local papers

Reports Referenced

Report: 2009 LCI Implementation Report

Report Type: Biennial external execution reporting.

Methods: Survey of grantee staff and grantee quantitative reporting.

Metric Category	Metrics	Type
Source and uses of funds	<ul style="list-style-type: none"> • Expenditures by program (planning funds, supplemental planning funds, implementation funds) • Expenditures by type (corridor, town center, activity center) • Source of funds 	Process
Private development activity	<ul style="list-style-type: none"> • Total development inventory in LCI areas - Development activity figures cover all development projects, regardless of alignment to LCI goals. <ul style="list-style-type: none"> ◦ Development by stage of construction ◦ Development volume by use: Residential units, Hotel units, Commercial space (sqft), Office space (sqft) • Alignment of development to LCI goals <ul style="list-style-type: none"> ◦ % of grantees approving development “that was not in line with their LCI goals” ◦ % of development that is mixed-use (residential and commercial or office) ◦ Average size of development (units/project; projects/LCI area), e.g.: <ul style="list-style-type: none"> ▪ % of residential that is over 200 units (indicates higher density) ▪ Average size of commercial, and % that is over 1,000,000 sqft (smaller/ finer mix indicates livability) • LCI area development as % of total development in region (indicates concentration of development in target areas) 	Primarily Output
Land use policy and regulation changes	<ul style="list-style-type: none"> • % of jurisdictions which adopted LCI plan into comprehensive plan (based on grantee survey) • Zoning and regulations changes - % of grantees: <ul style="list-style-type: none"> ◦ Created special zoning district for LCI ◦ Made development regulation changes • Affordability - % of grantees which had: <ul style="list-style-type: none"> ◦ Senior or affordable housing projects being developed ◦ Policies to focus on senior, workforce, or special needs housing 	Output

Implementation	<ul style="list-style-type: none"> • Factors contributing to success of program • Organization within grantee jurisdiction focused on implementing LCI (does one exist, and what type) • Funding sources used to support implementation (% by type) 	Process
Livability improvement perceptions (grantee survey)	<ul style="list-style-type: none"> • Overall livability • Opportunities to walk or bike • Ped/bike activity • Safety • Access to transit/ transit service options • Housing choices by type and price 	Output & Outcome
	<ul style="list-style-type: none"> • Employment opportunities • Mix of retail, restaurants and personal services • Street life • Local codes and ordinances • Community participation in planning • Participation in community activities 	
Report: 2009 LCI Indicators and Benefits Report		
Report Type: Biennial benefits analysis.		
Methods: Model potential impacts of implementation of LCI plans based on characteristics of LCI plans (analyzes only subset of plans). Uses INDEX software.		
Metric Category	Metrics	Type
Modeled outcomes	<ul style="list-style-type: none"> • Population density • Employment density • Street route directness • Use mix • Use balance 	Outcome (proj.)
	<ul style="list-style-type: none"> • Jobs to housing balance • Single-family and multi-family share • Transit-oriented Residential Density (units/ acre in ¼ mile of transit) • Vehicle Greenhouse Gas Emissions • Home-based Vehicle Miles Travelled 	
Report: 2009 LCI Breaking Ground Report		
Report Type: Project activity progress report. Data collected monthly, reported publicly every six months.		
Methods: Summary of project activity reporting from grantees.		
Metric Category	Metrics	Type
Sources and Uses of Funds	<ul style="list-style-type: none"> • Number and value of projects by county, study area, project type 	Process
Project Activity	<ul style="list-style-type: none"> • List of projects with the following data for each: <ul style="list-style-type: none"> ◦ Location ◦ Sponsor ◦ Name ◦ Description ◦ Federal and local funding for PE, ROW, and CST ◦ Project type (e.g., ped, transit) ◦ Project status (authorized, dropped, advancing, project of concern) ◦ Descriptive "update on progress" as of: <ul style="list-style-type: none"> ▪ Report issuance date ▪ Last report issuance date (6 months prior) • Summary of number of projects by status for each month since the last report 	

METROPOLITAN COUNCIL, MINNEAPOLIS-ST. PAUL METROPOLITAN AREA

Program Summary

Location: Minneapolis-St. Paul metropolitan area, Minnesota

Lead Agency: Metropolitan Council

Lead Agency Type: The Metropolitan Council is both the COG and the MPO for the Minneapolis-St. Paul metropolitan area. LCA programs reside within planning and development, not transportation. TBRA is a partnership with MN Dept. of Trade and Economic Development. LCDA grantees are developers, and local jurisdictions may be joint owners. LHIA is a partnership with the Minnesota Housing Finance Agency.¹⁴³

Program Name: Livable Communities Act (LCA) Grant Program

Purpose: The stated focus of the program varies depending on the report, but the enabling legislation takes a broad view, including job creation, affordability, density, and links among housing, jobs, and transit.¹⁴⁴

"...a voluntary, incentive-based approach to help the Twin Cities metropolitan area address affordable and lifecycle housing needs while providing funds to communities to assist them in carrying out their development plans."¹⁴⁵

"...funding for communities to invest in local economic revitalization, affordable housing initiatives, and development or redevelopment that connects different land uses and has good access to transportation."¹⁴⁶

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Goals and Objectives	
Goal Types: ¹⁴⁷ <ul style="list-style-type: none">• Job creation/economic development• Affordability• Mixed income development• Density• Links among housing, jobs, and transit	Stated Goals and Objectives: <ul style="list-style-type: none">• LCA legislation stated goals:¹⁴⁸<ul style="list-style-type: none">◦ Helping to change long-term market incentives that adversely impact creation and preservation of living-wage jobs in the fully developed area;◦ Creating incentives for developing communities to include a full range of housing opportunities;◦ Creating incentives to preserve and rehabilitate affordable housing in the fully developed area; and◦ Creating incentives for all communities to implement compact and efficient development.• LCA legislation specifies that the guidelines for LCDA provide that the projects will:<ul style="list-style-type: none">◦ interrelate development or redevelopment and transit;◦ interrelate affordable housing and employment growth areas;◦ interrelate affordable housing and employment growth areas;◦ intensify land use that leads to more compact development or redevelopment;◦ involve development or redevelopment that mixes incomes of residents in housing, including introducing or reintroducing higher value housing in lower income areas to achieve a mix of housing opportunities; or◦ encourage public infrastructure investments which connect urban neighborhoods and suburban communities, attract private sector redevelopment investment in commercial and residential properties adjacent to the public improvement, and provide project area residents with expanded opportunities for private sector employment.• LCA Grant Program overall:<ul style="list-style-type: none">◦ "Clean up polluted land for redevelopment, new jobs and affordable housing◦ Create development or redevelopment that demonstrates efficient use of land and infrastructure through connected development patterns◦ Create affordable housing opportunities"• TBRA: "Cleaning up polluted land for redevelopment and productive uses," with the following expected benefits:¹⁴⁹<ul style="list-style-type: none">◦ "Cleaner environment,◦ Revitalized communities,◦ More housing opportunities, and◦ Growth directed to central cities and older suburbs where costly infrastructure is already in place"• LCDA: "funding for development and redevelopment projects that achieve connected development patterns that link housing, jobs, and services, and use regional infrastructure efficiently"¹⁵⁰• LHIA: development grants to "help create and preserve affordable rental and ownership housing... at all of life's stages, and to support residential reinvestment and redevelopment to achieve economically healthy and livable communities."¹⁵¹• LAAND: Preference is given for land that is close to jobs, "allow density that is consistent with achieving affordability, minimizes vehicle miles traveled, and implements Green Communities criteria, Minnesota Overlay or comparable programs."

Strategies and Programs	
Strategies:¹⁵² <ul style="list-style-type: none"> Funding land cleanup Funding development/ redevelopment Funding land banking Planning: a prerequisite for all above funding is the negotiation with Metro of lifecycle and affordable housing goals and an LCA Housing Action Plan 	Programs: <ul style="list-style-type: none"> Tax Base Revitalization Account (TBRA): grants to “clean up polluted land for redevelopment” Livable Communities Demonstration Account (LCDA): “funding for development and redevelopment projects” Local Housing Incentive Account (LHIA): affordable housing development and rehabilitation grants New program in 2008 – Land Acquisition for Affordable New Development (LAAND) – uses LCDA funds for no-interest loans to LCA-eligible communities to take advantage of downturn in real estate costs. Past program – Inclusionary Housing Account (IHA) – (one time funding allocation in 1999) “supported affordable housing developments in which the reduction of local controls and regulations resulted in reduced development cost.”
Awards/ Evidence of Good Practice <ul style="list-style-type: none"> None stated. 	
Reports Referenced	
Report: <i>Metropolitan Livable Communities Fund: Report to the Minnesota State Legislature.</i> Report Type: Annual report, required by enabling legislation. Methods: Staff analysis of grant statistics.	
Category	Metrics
Source and uses of funds	<ul style="list-style-type: none"> Sources of funds Funding requests v. funding provided (for each fund, # applications, # awards, funds requested, funds available, funds awarded, number of dollars over/undersubscribed, number of communities receiving funding) – however, no efficiency measure
Evidence of Demand	<ul style="list-style-type: none"> See above (number of dollars over/undersubscribed)
Geographic Equity	<ul style="list-style-type: none"> Number of communities receiving funding from each account/program List of communities receiving funding
Private Development Activity	<ul style="list-style-type: none"> # of housing units created (ownership and rental) # of improved or rehabilitated existing housing units # of new/improved housing units which are affordable
Economic Development	<ul style="list-style-type: none"> # new or retained jobs
Environment	<ul style="list-style-type: none"> # acres of reclaimed polluted land
Efficiency/ Return on Investment	<ul style="list-style-type: none"> Private and public investment leveraged (no methodology provided – not clear to what degree the LCA programs influenced these investments in size or focus) Increase in net tax capacity Qualitative: “projects offer replicable examples,” funding is a catalyst
Quality of Life	<ul style="list-style-type: none"> Qualitative statement: “projects serve as destinations” Qualitative descriptions of each project

Report: *Metropolitan Livable Communities Act – Expected Results for Grants Awarded 1996-2008*

Report Type: Fact sheet.

Methods: Summary of figures in annual reports.

Category	Metrics	Type
Local government policy changes	<ul style="list-style-type: none"> Number of communities which have adopted “affordable and life-cycle” housing goals (a pre-requisite for applying for grant funding) 	Output
Uses of Funds, Private Development Activity, Environmental, Geographic Equity	<ul style="list-style-type: none"> Total new units and new affordable units which would be in place if all communities’ goals were reached Grants awarded (# and \$ and # of communities) TBRA: <ul style="list-style-type: none"> Leverage private investment Increase annual net tax capacity Provide new and retained jobs Redevelop former brownfields List of communities LCDA <ul style="list-style-type: none"> Leverage private development investment Leverage other public investment New housing units Rehabilitate housing units Offer replicable examples Provide better jobs/housing/transportation connections (qualitative statement – no metric) List of communities LH/A <ul style="list-style-type: none"> Same as LCDA, plus Affordable new and rehabilitated rental and owner housing units # home improvement loans to homeowners 	Primarily output and process

METRO, PORTLAND, OREGON

Program Summary

Location: Portland, Oregon Metropolitan Area

Lead Agency: Metro

Lead Agency Type: Metro is both the COG and MPO. Land use planning and transportation are closely connected through Metro's programs. The Urban Growth Re-port provides a consolidated view of the 2040 vision for the region, which includes land use, transportation, and natural environmental protection. Grantees are private developers and local jurisdictions.¹⁵³

Program Name: Transit-Oriented Development and Centers Program (TOD/Centers Program)

Purpose:¹⁵⁴ Pursue Metro's growth management plan through providing public investments to developers to build in concert with the plan's goals.

- "Metro's growth management plan, the 2040 Growth Concept calls for the region to grow up rather than out, away from farm and forest land by limiting expansion and focusing growth around the region's 44-mile MAX Light Rail Transit (LRT) line, along frequent bus corridors and in mixed-use urban centers."
- "The TOD/Centers Program pursues the Growth Concept by providing public investments to developers to build more intensely and with higher attention to creating a walkable environment than the market would complete on its own. A TOD or Centers development will result in a higher share of travel from transit, walking and biking and a lower percent by an automobile."

Goals and Objectives

Goal Types¹⁵⁵

- Increased transit, walking or biking
- Cost effectiveness
- Air quality
- Reduced auto congestion
- Economic development
- Housing and transportation options
- Location efficiency
- Attractive return to developers

Stated Goals and Objectives¹⁵⁶

- Primary benefit: "Shape the community for increased transit, walking or biking" in concert with the Metro 2040 Growth Concept
- Cost effectiveness (cites study showing TOD is more cost effective than new transit lines or "conventional congestion mitigation measures, such as new LRT construction, freeway expansion and vanpools")
- Air quality
- Reduced auto congestion
- Economic development
- Housing and transportation options
- Livability – defined as "convenient and inexpensive access to most of the region's major locations of jobs, services and trade Centers"
- "For the developer, the return is often the developer's fee and net profits from managing the project"

Strategies and Programs

Strategies¹⁵⁷

- Public investments to private developers, to "close the gap" ("Planning allows but does not cause certain development patterns. Metro... uses public investment to help shape desired development" (rather than regulation)¹⁵⁸)

Programs

- Primary strategies:¹⁵⁹
 - Land acquisition for future TOD projects
 - Purchasing TOD easements on projects requesting funding
 - Site improvements
- Three smaller programs:¹⁶⁰
 - Green building (Business Energy Tax Credits)
 - Education Advocacy and Technical Assistance
 - Small Projects and Loans, and Unsolicited proposals
- Three types of development areas: TOD, Centers, and Frequent Bus

Awards/ Evidence of Good Practice

- Featured in the British Broadcasting Corporation's series, "The World's Best Public Services" in 2006.¹⁶¹

Reports Referenced

Report: *Transit Oriented Development and Centers Program Annual Report 2007*

Report Type: One-time program analysis. Title indicates an annual report, but due to financial constraints Metro did not repeat the analysis annually.

Methods: Staff data analysis.

Category	Metrics	Type
Private and joint development activity	<ul style="list-style-type: none"> • Active and completed projects with name, jurisdiction, status, owner, and funding • Housing units by median family income affordability category and status (completed/under construction or approved) • Commercial SF by type (office or retail) and status 	Output Process
Sources and Uses of Funds	<ul style="list-style-type: none"> • Expenditure by type (land, projects, and operating expense) • Efficiency trend over time (operating expense) – includes figure and explanation of trend • Expenditure by program activity (TOD, Centers, Frequent Bus) • Land acquisition cost by jurisdiction and cost per square foot • Development project funding by jurisdiction 	Process
Geographic Equity	<ul style="list-style-type: none"> • See above (both categories) 	Process
Cost Effectiveness Analysis	<ul style="list-style-type: none"> • Cost per induced rider, v. building new transit lines, or traditional congestion management techniques¹⁶² • Net present value of farebox revenues: funding generally does not exceed this figure • Cost premium compared to base case (e.g., mixed use is more expensive than single use): funding generally does not exceed this figure • Other funding leveraged: <ul style="list-style-type: none"> ◦ Development project funding by jurisdiction ◦ Funding by development entity (owner) 	Process

Report: *Urban Living Infrastructure*

Report Type: Not a performance report. Analysis of whether "urban living infrastructure improves financial feasibility of mixed use residential development," and "if public investment in urban living infrastructure is a cost effective strategy to catalyze centers development."

Methods: Hedonistic statistical modeling of home transactions proximate to various urban amenities.

Category	Metrics	Type
Financial return/ cost effectiveness	<ul style="list-style-type: none"> • Price premium estimates for proximity to various urban amenities, by housing type and household characteristics. 	Outcome

Report: *State of the Centers: Investing in Our Communities*

Report Type: Not a performance report. Detailed baseline analysis of all designated centers and corridors. Description of six typologies and the current profile of each center/corridor to help guide program focus overall and to help local planning.

Methods: Case analysis.

Category	Metrics	Type
Urban Amenities	<ul style="list-style-type: none"> Summary statistics on all designated urban centers, regional centers, and corridors, including: <ul style="list-style-type: none"> People and dwelling units per acre Median income Total acres Median age Percent owner occupied Total businesses per acre <p>Description of each designated urban center, regional center, and corridor, including:</p> <ul style="list-style-type: none"> Count of each business type designated as urban amenities by the <i>Urban Living Infrastructure</i> report (described above) <ul style="list-style-type: none"> Bakery Child care Dry cleaner Grocery store Bar Cinema Fast food restaurant Limited service restaurant Bike shop Clothing store Fitness gym Music store Book store Coffee shop Full service restaurant Wine bar/sales Brew pub Deli Garden store Quantitative summary with comparison to average, including: <ul style="list-style-type: none"> Number of each type of business Median age Activity level (e.g., 24 hour, 14 hour) Home ownership percentage Jobs to housing ratio People per acre Economic focus (e.g., employment, tourism) Dwelling units per acre Floor area ratio (a measure of density of use) Median household size and income Qualitative description of urban form and transportation access (road and transit) 	Baseline/outcome

Report: *Metro Management Report and Metro Management Report At-a-Glance*¹⁶³

Report Type: Quarterly report of activities and issues against each Metro budget category. Not used by program staff.

Methods: Management activity reporting.

Category	Metrics	Type
Program Activity Report	<ul style="list-style-type: none"> Provides a description of activities and outputs for each budget program – no predetermined metrics – management chooses what activities to include <ul style="list-style-type: none"> Budget program title Budget program description Major accomplishments for this period Major accomplishments/corrections for next quarter; Items for management and Council attention/action 	Process, Output

Report: <i>The Portland Region: How Are We Doing</i>		
Report Type: Performance against overall regional planning goals (not just TOD/Centers Program). Executed in 2003 and 2004, but no subsequently. Not used by program staff.		
Methods: Summarizes detailed performance report, which is derived from staff data analysis and stakeholder surveys ¹⁶⁴		
Category	Metrics	Type
Economic	<ul style="list-style-type: none"> Encouraging a strong local economy: <ul style="list-style-type: none"> Commercial, industrial, and mixed-use land supply, by type, with year-on-year (YOY) comparison Land values, by type, with year-on-year comparison Goods movement by type (no trend) Encouraging efficient land use: <ul style="list-style-type: none"> Population, households and employment attracted to the region: % of growth captured within the UGB Employment: industrial and commercial land, development and job growth (YOY) 	Output and outcome (job growth, land values)
Efficient land use	<ul style="list-style-type: none"> Encouraging efficient land use: <ul style="list-style-type: none"> Residential: change in density Mixed use centers: % of employment and residences in mixed use areas (v. single use areas) (snapshot) 	Output
Environment	<ul style="list-style-type: none"> Protecting and restoring the natural environment: <ul style="list-style-type: none"> Acquisition: acreage acquired v. target; funds available for acquisition Regulation: acreage by type protected be regulation Waste management: waste recovery and waste disposal 1995 v. 2000 and 2000 v. goal Providing Transportation Choices: <ul style="list-style-type: none"> Air quality days of violation over time Air quality days of violation v. comparable cities 	Output and outcome
Transportation Choice	<ul style="list-style-type: none"> Providing Transportation Choices: <ul style="list-style-type: none"> Freeway traffic growth by corridor VMT total and per capita trend over time (1990-2000) Transit ridership % growth (1990-2000) v. population and VMT growth Transit ridership by bus v. each light rail line Transportation capital needs v. spending by mode 	Output
Affordability and Options in Housing	<ul style="list-style-type: none"> Ensuring diverse housing options <ul style="list-style-type: none"> Number of single family homes built by sqft range, comparing 1996 to 2000 % of housing permits to single v. multi-family housing, 1990-2000 Median income and home selling price (Portland region v. US) (1990 v. 2000) Median home affordability surplus (median home price v. home price affordable at the median income) (1990 v. 2000) Home ownership rate v. US (1990-2000) 	Output and Outcome
Quality of life	<ul style="list-style-type: none"> Creating vibrant place to live and work: park acres per capita Maintaining separation between Metro urban growth boundary and neighboring cities (qualitative discussion only) 	Output

Additional information

Metro also reported very detailed metrics for each goal in the *2040 Growth Management Plan* in the *2004 Performance Measures Report: An evaluation of 2040 growth management policies and implementation*.¹⁶⁵ This report covers performance against overall regional planning goals (not just TOD and Centers Program). The report indicates it was to be developed annually, but no subsequent reports were found on the Metro website. The report focuses primarily on outputs, with some outcomes.¹⁶⁶ “The performance measures report analyzes trends and focuses on outputs (how much effort has been made). Outcomes (the change that has occurred or how the region has improved) were also addressed, but were based on the relationship between an adopted policy and an outcome. The report does not suggest benchmarks or targets for achieving regional planning objectives and avoids editorial commentary and suggestions of which policies may need revamping.”

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS TRANSPORTATION DEPARTMENT

Program Summary

Location: North Central Texas

Lead Agency: North Central Texas Council of Governments (NCTCOG) Transportation Department

Lead Agency Type: NCTCOG is the MPO as well as the COG, and the program is run out of the transportation department, with transportation funding. A related program run by NCTCOG's transportation department's sustainability program, the Brownfields Revolving Loan Fund, is EPA funded. Local government with land use authority is primary grantee. For profit developers are required as secondary sponsor for infrastructure projects (optional for planning).

Program Name: Sustainable Development Initiative (SDI)

Purpose: Promote development types that reduce the overall demand for transportation infrastructure and improve air quality (2005 program description).

Goals and Objectives

Goal Types¹⁶⁷

- Density
- Mixed use
- Rail and walking options
- Housing-Income Match
- Job Creation

Stated Goals and Objectives

- Promote each of the following, and the intersection of the following (e.g., infill mixed use with rail access)
 - Utilization of existing system capacity
 - Mixed use
 - Rail mobility
 - Access management (“shared drives/parking, spacing of turns/signals”)
- 2005 program included incentive for:
 - Housing-Income Match
 - Workforce Housing Near Transit
 - Areas with High Emitting Vehicles
 - Density/Walkability
 - Mix of Residential and Non-Residential Uses
 - Job Creation In High Unemployment Areas
 - Public sector action to un-bank previously banked land

Strategies and Programs	
Strategies ¹⁶⁸ <ul style="list-style-type: none"> • Funding development – leveraging private funds (PPP projects) • Funding planning • Funding land banking • Best practice sharing 	Programs <ul style="list-style-type: none"> • 2001 Sustainable Development Program (\$40.8M) <ul style="list-style-type: none"> ◦ Infrastructure projects (e.g., station and station area development) ◦ Regional Rail Corridor Study (Planning/Outreach) ◦ Center of Development Excellence (Planning/Outreach) • 2005-6 Sustainable Development Program (\$40M) <ul style="list-style-type: none"> ◦ Transportation infrastructure within an area of interest: <ul style="list-style-type: none"> ▪ Rail station ▪ Infill in area with high unemployment, emissions, or low income ▪ Historic downtowns ◦ Land banking (max 20% of funds) ◦ Center of Development Excellence ◦ Local Sustainable Development Planning Programs • 2009 Sustainable Development Program (\$40M): <ul style="list-style-type: none"> ◦ Infrastructure within an area of interest: <ul style="list-style-type: none"> ▪ Rail station (1/4 mile) ▪ Passenger rail (1/4 mile) ▪ Infill in area with high unemployment, emissions, or low income ▪ Main Street/Historic District ◦ Planning
Awards/ Evidence of Good Practice	
<ul style="list-style-type: none"> • None cited. 	
Reports Referenced	
Report: <i>Sustainable Development Program</i> Report Type: Call for projects presentations at regional events Methods: Staff analysis of project data	
Category	Metrics
Uses of Funds	<ul style="list-style-type: none"> • 2001 Infrastructure projects <ul style="list-style-type: none"> ◦ Number by stage (cancelled, underway, completed) ◦ Geographic distribution • 2005 infrastructure projects <ul style="list-style-type: none"> ◦ Geographic distribution ◦ # and \$ requested by program area (transportation infrastructure, land banking, planning) ◦ Funds shortfall ◦ # and \$ funded by program area
	Process and Output

Private development activity and Economic	<ul style="list-style-type: none"> • Description of select 2001 Infrastructure projects with select data, including one or more of the following in each case: <ul style="list-style-type: none"> ◦ Value of public and private investments ◦ Change in property value and resulting revenue ◦ Acreage ◦ Use mix ◦ Units ◦ Jobs created ◦ Transit access features 	Output and some outcome
<h2>METROPOLITAN TRANSPORTATION COMMISSION, SAN FRANCISCO BAY AREA</h2> <h3>Program Summary</h3>		
<p>Location: San Francisco Bay Area</p> <p>Lead Agency: Metropolitan Transportation Commission (MTC)</p> <p>Lead Agency Type: MPO</p> <p>Program Name: Transportation for Livable Communities (TLC)</p> <p>Purpose: "The purpose of the Transportation for Livable Communities (TLC) Program is to support community-based transportation projects that bring new vibrancy to downtown areas, commercial cores, neighborhoods, and transit corridors, enhancing their amenities and ambiance and making them places where people want to live, work and visit. TLC provides funding for projects that provide for a range of transportation choices, support connectivity between transportation investments and land uses, and are developed through an inclusive community planning effort."¹⁶⁹</p>		
Goals and Objectives	<p>Stated Goals and Objectives</p> <ul style="list-style-type: none"> • Support community-based transportation projects that: <ul style="list-style-type: none"> ◦ "Develop projects through a collaborative and inclusive planning process..." ◦ "Improve a range of transportation choices" by improving ped/bike/transit facilities and links between facilities and activity nodes ◦ "Support well-designed, high density housing and mixed use developments" near transit or that will support future transit ◦ "Support a community's infill or TOD and neighborhood revitalization" ◦ Enhance "sense of place and quality of life" 	
Goal Types ¹⁷⁰	<ul style="list-style-type: none"> • Joint planning • Transportation choice • Mixed use/ density near transit • Revitalization/infill • Quality of life/sense of place 	

Strategies and Programs		
Strategies ¹⁷¹	Programs	
<ul style="list-style-type: none"> Joint planning funding Funding transport infrastructure tied to goals Reward development meeting goals with transport funding 	<ul style="list-style-type: none"> TLC Planning program: funds community planning efforts to revitalize existing neighborhoods, downtowns, commercial cores and transit stops and create more pedestrian-, bicycle-, and transit-friendly environments TLC Capital Program: funds transportation infrastructure improvements that encourage pedestrian, bicycle and transit trips and support high-density, mixed use development Housing Incentive Program (HIP): rewards communities with funding for TLC-type transportation improvements when they build high density housing and mixed-use developments at transit stops 	
Awards/ Evidence of Good Practice		
<ul style="list-style-type: none"> None cited. 		
Reports Referenced		
Report: <i>Ten Years of TLC: An Evaluation of MTC's Transportation for Livable Communities Program</i> Report Type: Periodic program evaluation (previous evaluation was completed in 2004). Results were also summarized in presentations to MTC's planning committee and the Focus Forum. Methods: Survey of grantee project managers, co-sponsoring community organizations for capital grants, local business owners, and end users. Focus is on completed projects.		
Category	Metrics	Type
Uses of funds and funding demand	TLC Planning Program: <ul style="list-style-type: none"> Adequacy of grant size: <ul style="list-style-type: none"> Max and average size of grant Grantee need to supplement grant with local funds (qualitative statement "typically added a substantial amount") Grantee perception of adequacy of grant size Plan content: most common planned improvements in each category (capital, policy) Synergies across the programs <ul style="list-style-type: none"> % of implementation funds for TLC Plans coming from TLC Capital Program % of projects receiving TLC Capital Grants which came from TLC Planning Grant plans 	Process and output
Effectiveness and efficiency	<ul style="list-style-type: none"> Benefits: Grantee perception of program benefits Implementation of plans: <ul style="list-style-type: none"> Percent of planned capital projects and policy changes actually implemented 	Process (strategic as well as tactical)
Uses of funds, funding demand, leveraged funds	TLC Capital Program: <ul style="list-style-type: none"> % of funds used by improvement type (ped, transit, bicycle, traffic calming) Average local match Grantee perception of effectiveness of TLC funds in leveraging other funds ("TLC funds are often some of the first funds on the table") 	Process and output

Effectiveness and efficiency	<ul style="list-style-type: none"> • Goal achievement: grantee perception of the effectiveness of capital projects in furthering each TLC goal capital (note: top result was sense of place and quality of life) • Grantee perception of which types of projects most/least effectively meet TLC goals (note: before and after statistics were not measured, so only perception could be used as a measure) 	Process (strategic as well as tactical)
Private development activity	<p>Housing Incentive Program (HIP)</p> <ul style="list-style-type: none"> • # projects funded • # new housing units • % affordable • Distance of improvements from housing project (adjacent, within 1/2 mile, further) • % of grantees stating HIP grant in facilitated the permitting process and provided a positive incentive (v. provided a reward) • Grantee perception of key challenges to HIP being an adequate incentive • Grantee perception of whether the requirements were “realistic” 	Output
Effectiveness and efficiency		Process (strategic as well as tactical)
Additional information		
<p><i>Ten Years of TLC: An Evaluation of MTC's Transportation for Livable Communities Program</i> also provides an outline of the measures that the evaluators would have liked to use if the data were available.</p> <p><i>Financing Transit Oriented Development in the San Francisco Bay Area: Policy Options and Strategies</i>¹⁷² provides a list of recommended new performance measures for TLC, along with potential data sources.</p>		

ABBREVIATIONS AND ACRONYMS

ARC	Atlanta Regional Commission
COG	Councils of Governments
CTC	California Transportation Commission
CTOD	Center for Transit-Oriented Development
DDA	Difficult to Develop Areas
EPA	Environmental Protection Agency
FTA	U.S. Federal Transit Administration
GPRA	Government Performance and Results Act of 1993
HUD	U.S. Department of Housing and Urban Development
IPSC	Interagency Partnership for Sustainable Communities
LAAND	Land Acquisition for Affordable New Development
LCA	Livable Communities Act
LCA	Livable Communities Act Grant Program
LCDA	Livable Communities Demonstration Account
LCI	Livable Communities Initiative
LHIA	Local Housing Incentive Account
LIHTC	Low Income Housing Tax Credit
LRT	Light Rail Transit
MC	Metropolitan Council
Metro	Portland, Oregon, Metropolitan Area Agency
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
NCTCOG	North Central Texas Council of Governments
QCT	Qualifying Census Tracts
ROI	Return on Investment
RPI	Responsible Property Investment
SDI	Sustainable Development Initiative
STIP	State Transportation Improvement Program (California)
TBRA	Tax Base Revitalization Account
TCRP	Transit Cooperative Research Program
TLC	Transportation for Livable Communities Program
TOD	Transit-Oriented Development
ULI	Urban Living Infrastructure
USDOT	U.S. Department of Transportation
VMT	Vehicle Miles Traveled

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ABOUT THE AUTHORS

PETER J. HAAS, PH.D.

Dr. Haas is currently the Education Director at the Mineta Transportation Institute at San Jose State University. He is also a member of the faculty of the Master of Public Administration (MPA) program in the Department of Political Science. He earned his doctorate in the field of Public Policy and Public Administration from the Department of Political Science at the University of North Carolina at Chapel Hill in 1985 and has also taught at the University of North Carolina, East Carolina University, and Virginia Tech. He is the author of many publications, including a co-authored textbook on policy analysis and program evaluation, "Policy Research: Concepts and Cases." As Education Director for the Mineta Transportation Institute, he administrates a statewide program that prepares transportation professionals for upper-level management and executives positions throughout the transportation industry.

LISA FABISH

Lisa Fabish has been a transportation management consultant, working across multiple modes, including transit, aviation, and high-speed rail. Previously, she consulted for more than a decade to commercial, not-for-profit, and government clients across multiple sectors, including energy, technology, financial services, health, security, telecommunications, agricultural products, automotive, and education. Her work has spanned a broad range of functions, including strategy, organization, financial management, risk management, mega-project management, and operations. Ms. Fabish earned degrees from Yale University (Master in Business Administration), Tufts University (Bachelor of Arts in Sociology), and San Jose State University (Master of Science in Transportation Management).

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